

Inventors

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DIGEST

Mark Cuban's FOOD FIGHT

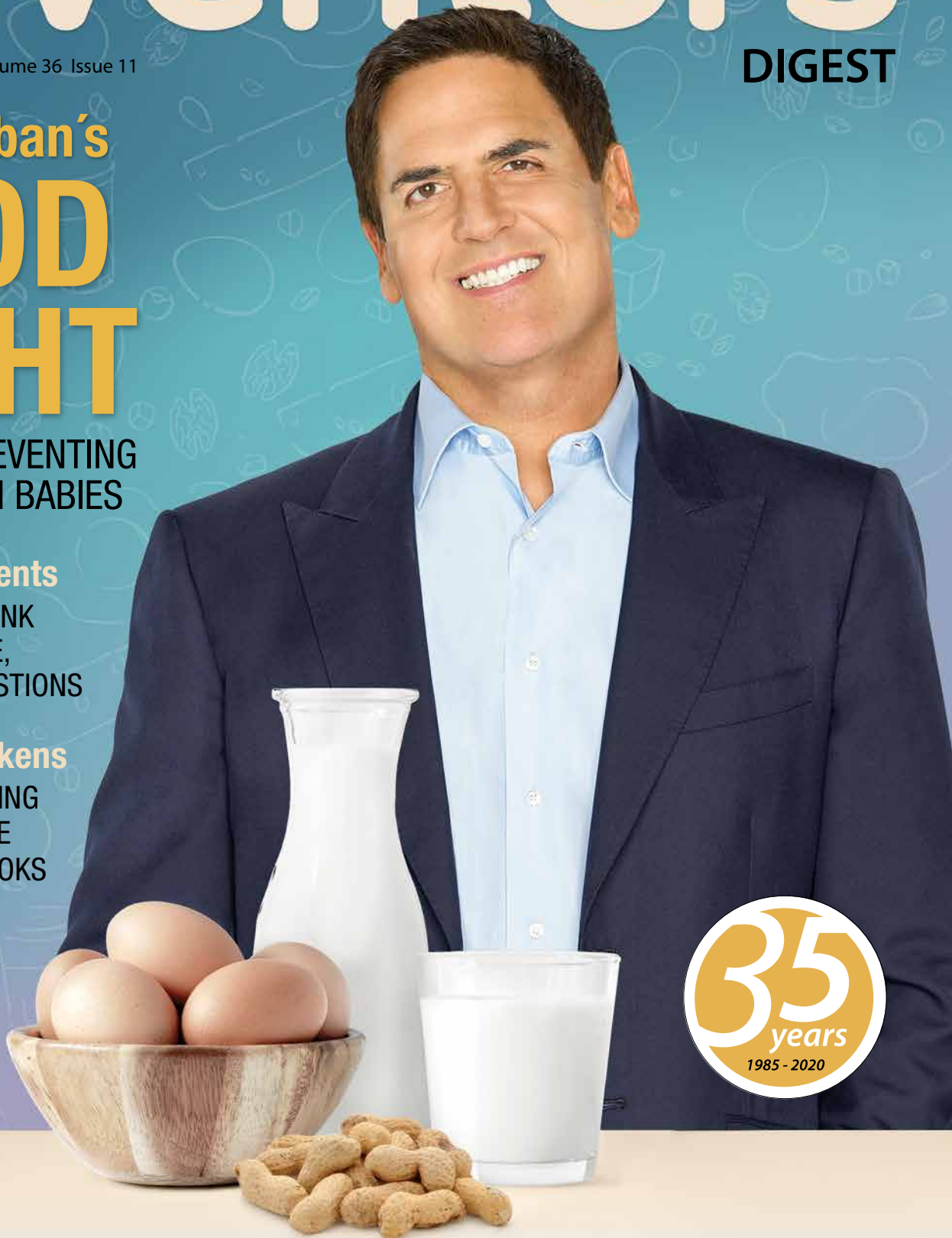
MISSION: PREVENTING
ALLERGIES IN BABIES

Licensing Agents

BEFORE YOU THINK
YOU FOUND ONE,
ASK THESE QUESTIONS

The Plot Thickens

HOW PROTOTYPING
STAGES ARE LIKE
MOVIES AND BOOKS



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Write Us: Who's Your Favorite Inventor?

Let's flip things upside down this month and start the magazine with a mini quiz.

What do Abraham Lincoln, Paula Abdul, Lawrence Welk and Charlie Sheen have in common?

If you've read *Inventors Digest* for a while, you might know the answer: They're all inventors with patents.

Lincoln, the only U.S. president ever awarded a patent, got his for a device to lift boats over shoals. (It was never manufactured.) Abdul invented a microphone stand but abandoned the patent. Welk invented an ash tray that looked like an accordion. Sheen's triumph is a Chapstick dispensing apparatus with a hinged cap.

One of the joys of bringing you this magazine is surprising you with inventions as well as inventors. Would you have imagined that this month's cover subject Mark Cuban, better known as an NBA team owner and billionaire entrepreneur, is a named inventor of 11 patent families and 23 distinct patent publications for his inventions?

You don't need a patent to be an inventor, but it usually helps. Earl "Madman" Muntz (*Inventors Digest*, February 2017) is the acknowledged inventor of the 4-track tape but never had a patent associated with his signature creation. Same with Sy Berger (October 2020), the father of the modern-day baseball card.

Inventors come in all forms, from the prolific Edisons and Franklins (the latter who never sought a patent) to the one-time flashes.

My father, who co-invented a patented method for surgical draping, is my favorite inventor. Who is yours?

We think this would make a good story in *Inventors Digest*: readers chiming in with their favorite inventor, and why.

Send us 2-3 paragraphs by snail mail or email (see contact information on Page 7)—even a headshot of yourself if you're feeling brave. If we get enough responses, we'll feature your selections in an upcoming issue.

It's Election Month. So vote for your favorite, sans the invective and negativity of that other election.

—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.

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SaveTheInventor.com

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AMERICAN
INVENTOR**



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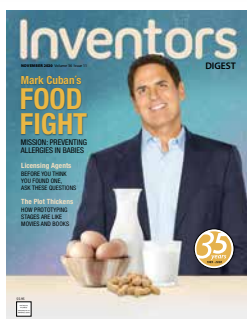
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ON THE COVER
Billionaire entrepreneur
Mark Cuban; photo by
ABC | Bob D'Amico

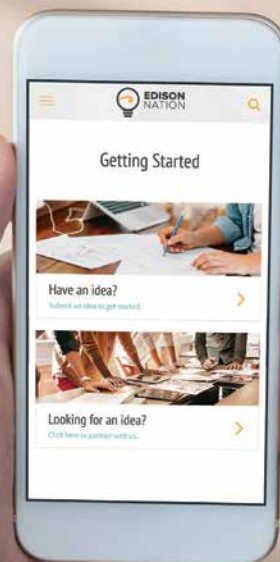
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Letters and emails in reaction to new and older **Inventors Digest** stories you read in print or online (responses may be edited for clarity and brevity):

What Makes an IoT Device Tick? (February 2017):

Well done. Few people in the know take the time to explain technology to the novice as you have done. Thank you for sharing.

—AUSTIN R WALTER

(Editor's note: This post at inventorsdigest.com, regarding Jeremy Losaw's story that appeared almost four years ago, shows how Inventors Digest has always been on the cusp of the latest technology.)

I commend you on your interesting and unique magazine. I am not an inventor but thoroughly enjoy reading about the imagination and expertise of others who come up with incredibly interesting ideas and are able to see them through the whole design and manufacturing process.

Innovative thinking is alive and well. Thank you for sharing their stories with us.

—ROSEMARY BRUNNER

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WHO SAYS IP DISPUTES CAN'T BE FUNNY?

Do they rank with Bill Murray's 1980 golf comedy "Caddyshack"? Maybe not, but the clever jabs in a recent copyright dispute between Murray's golf clothing company and the Doobie Brothers were straight down the fairway.

The actor/comedian's William Murray Golf apparel brand has been selling a shirt called "Zero Hucks Given" in honor of Huckleberry Finn. When ads began appearing for the shirt featuring the classic rock band's 1972 hit "Listen to the Music"—apparently without permission—a Doobies attorney rolled up his sleeves.

Among Peter Paterno's greatest hits in a letter that went viral on Twitter:

- "This is the part where I'm supposed to cite the United State (sic) Copyright Act, excoriate you for not complying with some subparagraph that I'm too lazy to look up and threaten you with eternal damnation for doing so. But you already earned that with those Garfield movies. And you already know that you can't use music in ads without paying for it"



- "'Listen to the Music' is a fine song. I know you agree because you keep using it in ads for your Zero Hucks Given golf shirts. However, given that you haven't paid to use it, maybe you should change the company name to 'Zero Bucks Given.'"
- "We'd be almost OK with it if the shirts weren't so damn ugly. But it is what it is."
- "It seems like the only person who uses our clients' music without permission more than you do is Donald Trump." (See this space in the August 2020 *Inventors Digest*.)

Alexander Yoffe, lawyer for Murray's golf apparel company, responded by saluting Paterno for "finding levity in

the law at a time when the world and this country certainly could use a laugh."

Yoffe wrote that his law firm and William Murray Golf "are indeed fans of the Doobie Brothers' music, which is why we appreciate your firm's choice of 'Takin' It to the Streets,' rather than to the courts, which are already overburdened 'Minute by Minute' with real problems."

He did offer a peace offering of sorts: "Please provide us with the shirt size for yourself, Tom Johnston, Patrick Simmons, Michael McDonald, and John McFee, along with which of our client's shirts you find the *least* offensive, and we will happily upgrade your wardrobes and hopefully win each of you over as new fans of the brand."

BRIGHT IDEAS

Dodow

SLEEP-AID DEVICE

mydodow.com

Dodow is a breathing rhythm device that purportedly helps users fall asleep 2.5 times faster.

The device's blue light is projected to the ceiling. Synchronize your breathing in rhythm with the light by inhaling when the beam expands and exhaling when it shrinks. This de-emphasizes thoughts that keep you awake. Decreasing brain activity accelerates sleep.

In 8 minutes, Dodow is designed to gradually decrease your breaths to six per minute. In this steady rhythm, exhalation longer than inspiration leads to a feeling of fatigue.

Made in France, Dodow costs 54.89 euros including shipping (about \$64 U.S.).



The Neck Hammock

NECK PAIN RELIEF

tryneckhammock.io

This cervical traction device, which attaches to any door, is purported to relieve neck pain in 10 minutes or less. Just rest your neck in it.

The Neck Hammock can help relax and stretch the muscles, allowing the intervertebral area to expand and facilitate better blood flow and circulation. Better circulation helps oxygenate muscles, nerves, tendons and ligaments. This leads to decreased pain and increased mobility.

The device could relieve tension headaches, release pinched nerves, reduce herniated discs and relieve overall pressure.

With a future retail price of \$79, Neck Hammock has a scheduled February shipping timetable for crowdfunding Rewards backers.



Peeps

GLASSES-CLEANING CARBON FORMULA

getcarbonklean.io

Peeps™ features a patented invisible carbon formula that safely and easily cleans all kinds of eyeglasses and sunglasses.

The two-step cleaning first uses a scratch-resistant brush to remove dust and abrasive particles. Then retract the brush and pull the cleaning tongs free of the case/recharging station. Using the tongs, place the lens in between, gently squeezing and rubbing the carbon cleaning pads across the lens.

Peeps' carbon formula is used by NASA on the Space Station and by the military. The product comes with a compact carrying case.

Said to be effective for up to 500 uses, Peeps retails for \$19.99.

**"Minds are like
parachutes;
they work best
when open."**

—THOMAS DEWAR

POSSIBLE DELAYS

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

TUSHÉ

WET WIPE ALTERNATIVE

cleantush.com

TUSHÉ is designed as a sustainable alternative to single-use plastic wet wipes.

The touchless technology dispenses a foam onto your toilet paper. Tear off some toilet paper, fold it or scrunch it, put it under the dispenser, and UR sensors trigger automatic discharge of the foam. The dispenser has short and long foaming modes.

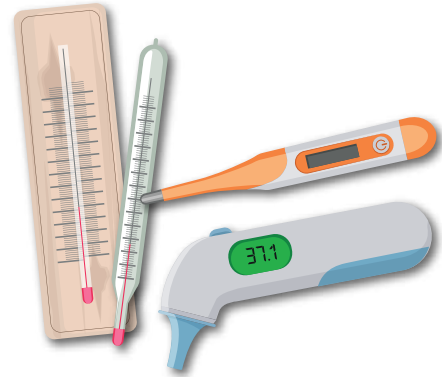
One 8-oz. bottle fits perfectly in an empty dispenser. Each bottle is equivalent to 500 wet wipes.

TUSHÉ will retail for \$70, with an estimated January shipping date for crowdfunding Rewards backers.



Innovation Rising

COVID TECHNOLOGY IS THE LATEST IN THE THERMOMETER'S LONG EVOLUTION **BY REID CREAGER**



GIL THORP and his student-athletes would find this cool.

The iconic comic strip's writer, Neal Rubin—a longtime friend and devotee of *Inventors Digest*—recently was on a two-night golf trip to Arcadia, Michigan, when he was tested with a COVID-related device at the on-site hotel. Also a columnist for the *Detroit News*, Rubin found his reporter's curiosity piqued.

"They took everyone's temperature going into the hotel with some gizmo mounted on a table," he wrote me. "You put your forehead a few inches away from it, someone pushed a button, and voila, a number displayed digitally."

More bomb diggity than Gil's haircut, yes. Then, as someone with a childlike curiosity that belongs, well, in a comic strip, Rubin's mental Wayback Machine fast-reversed to thermometers that have evolved throughout our lives.

"It seems like for years, there was that one our moms just put ... somewhere. Then suddenly we had higher-tech alternatives, each more seemingly effortless and unobtrusive than the last. Is that electronic in-the-ear gizmo still

available, or has it already become the iMac of thermometers?"

Rubin's question about the evolution of the thermometer got us thinking, too. We found it's factual that the thermometer has had many incarnations. It's not nearly as factual to conclusively say when it originated.

A who Fab Four

Who invented the thermometer?

Pose that question on Google and you get Sir Thomas Allbut (misspelled).

Ask on Bing and you get Daniel Gabriel Fahrenheit.

But wait, says English thermometer and instrumentation company Brannan. It was Santorio Santorio.

Nope, says ThoughtCo. It was Galileo Galilei.

Gee willikers, Neal Rubin! Thank you so much for your question.

Let's go back to a time that would test even the hardest Wayback Machine. It could be true that the ancient Egyptians, Chinese, Romans, Greeks, etc., had a specific way to measure temperature, but none that is a point of fact.

The National Institute of Standards and Technology says that about 2,000 years ago, Greek engineer Philo of Byzantium conceived what may be the earliest design for a thermometer: a hollow sphere filled with air and water, connected by tube to an open-air pitcher. The air inside the sphere expanded or contracted as it was heated or cooled, pushing or pulling water into the tube.

Some say Galilei invented the thermometer in 1593. But many sources on this agree that

INVENTOR ARCHIVES: NOVEMBER

November 15, 1904: King C. Gillette was granted a patent for a safety razor (one with a guard to protect against cutting the skin).

November 6, 1928: Colonel Jacob Schick patented the first electric razor.

Gillette Co., founded in 1901, is the global leader in razor sales. Schick (1926) is its biggest competitor. So why isn't November National Shaving Month?



It's factual that the thermometer has had many incarnations. It's not nearly as factual to conclusively say when it originated.

what he invented was actually a thermoscope, because it did not measure temperature differences. It only indicated these differences.

In other words: Because the thermoscope did not have any scales, one could know about a change in temperature but could not measure the exact difference. And it couldn't record data.

The Italian Santorio invented his thermometer in 1654. He applied a scale to an air thermoscope, addressing Galilei's omission, but his invention was an air thermometer that could be wildly inaccurate.

Fahrenheit brought mercury into the equation in 1714. It resulted in the modern temperature-reading instrument still used today, thermometers with unprecedented accuracy.

(The other standard temperature-measuring system—Celsius—was named after Anders Celsius. In 1742, he became the next person after Fahrenheit to come up with a correct scale to measure temperature.)

And if you think the discrepancies about the inventor of the thermometer can be any crazier, it's apropos that a man who was once the commissioner for lunacy in England and Wales is on some lists.

Sir Thomas Clifford Allbutt invented the short clinical thermometer in 1867. It was 6 inches long and took about five minutes to take a person's temperature—the thermometer that, as Rubin says, “our moms just put ... somewhere.” This version remained basically unchanged for about 100 years.

Enduring mainstays

Still regarding temperature-measuring devices for living things: The “electronic in-the-ear gizmo,”

now digital, is very much alive and well. Ear (or tympanic) thermometers are important because the human ear's proximity to the brain makes it an accurate point to measure body temperature.

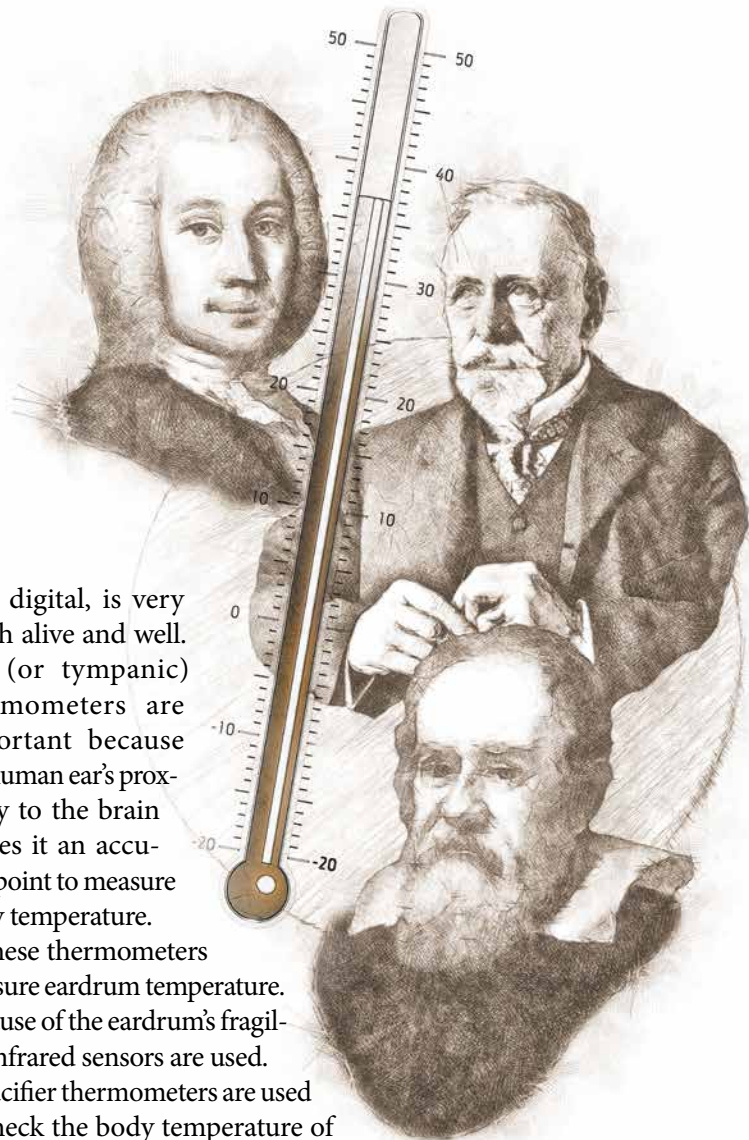
These thermometers measure eardrum temperature. Because of the eardrum's fragility, infrared sensors are used.

Pacifier thermometers are used to check the body temperature of babies. Other human measuring thermometers include oral ones, those used under the arm, and the ones used in that “somewhere” place. All are considered very accurate.

Non-human measuring devices include food and outdoor thermometers, with mechanisms using mercury and alcohol; the bimetal thermometer that uses a strip usually in the form of spiral rod; and resistance, gas and infrared thermometers.

By the way, the no-contact infrared forehead scanner that Rubin used is helpful but not perfect. Forehead temperature is several degrees lower than core body temperature of 98.6 F (37 C), so these thermometers make a mathematical adjustment to display an equivalent oral temperature.

Such technology will doubtless experience the rapidly escalating improvement in seemingly all equipment today—even if the next great thermometer advancement will not come from any of Thorp's current or former students. ☛



Anders Celsius (top) devised a correct scale to measure temperature. Sir Thomas Clifford Allbutt (center) invented the short clinical thermometer in 1867 that remained basically unchanged for about 100 years. Galileo Galilei (bottom) invented a device in 1593 that many people say was a thermoscope.

All I Need is a Licensing Agent

FINDING AN HONEST, RELIABLE ONE MAY BE PIE IN THE SKY
—SO BE SURE YOU ASK THESE QUESTIONS **BY JACK LANDER**

THE DREAM of many inventors, perhaps most, is to engage a licensing agent to handle finding and negotiating with potential licensees. But that dream may become a nightmare if you select the wrong person for the job.

Responsible agents exist, of course. Ideally, like real estate agents, they don't ask for upfront money for their service. Those agents are very, very fussy about the inventions that interest them, and for which they would consider taking on the inventor as their client.

Also, legitimate agents will not be interested unless you have an issued patent. I have come across only three such agents in all the years I've been helping inventors.

I asked one of them what percentage of inquiring inventors he took on as clients. He told me he didn't keep such data, but he guessed that it was 1 percent or less. He also said he was interested almost exclusively in tools.

Agents who advertise their service ask for an upfront evaluation fee. From the inventor's perspective, the downside to such agents is that some of them make all or almost all their living on the evaluation fees, rather than on receiving a share of the inventors' royalties from licenses that they have successfully negotiated. And if an agent is making a living by evaluations, his or her incentive to represent clients can become extremely low.

Be ready to walk away

Licensing is not an easy process. "Cherry picking" the most promising inventions for representation is human nature. Our protection

against this possibility is to ask questions that if answered honestly will help us assess the agent.

Some of the fee-upfront agents will offer various combinations of fee plus royalties. This offer helps them create the image of a legitimate agent who succeeds in regularly licensing inventions, which may or may not be true.

A few questions to ask:

- What percent of the inventors whose inventions you have evaluated have you agreed to represent for the true purpose of obtaining a licensing agreement?
- What percent of clients you have formally represented for licensing their patent have actually concluded a licensing agreement?
- Do you have a list of satisfied users who agree that I can contact them?
- What percent of your clients are dissatisfied?
- Do you have a money-back guarantee if your client is dissatisfied?
- Will I get a written, detailed report of the research you have done in the evaluation process for which I pay a fee?
- Will you represent a client who has not filed for a utility patent? (Design patents are generally not licensable.)

If the agent refuses to answer these questions, especially the first and the last, I suggest you walk away.

He or she will squirm and hem and haw. Typically, the response will be something like, "Our work is proprietary," or "Our attorneys have advised us against disclosing any information that we develop," or "You don't have to worry; our rating is A+ with the Better Business Bureau." Etc.



The least desirable so-called licensing agents are those who charge a fee of up to \$15,000 to promote your invention. These people are better defined as invention promoters than licensing agents.

Beware of invention promoters

The least desirable so-called licensing agents, however, are those who charge a fee of up to \$15,000 to promote your invention. These people are better defined as invention promoters than licensing agents.

They start with an “evaluation” fee, usually for less than \$1,000. Then, they evaluate and report that your invention appears to “have promise,” and they’ll undertake to promote it for a fee that’s usually between \$10,000 and \$15,000.

In order to stay legal, they actually promote it by creating a fancy sell-sheet or brochure, complete with impressive computer-simulated photos, diagrams, benefits, features, a sales pitch, etc. They mail these to a list of businesses taken from any of several common directories—Census Bureau data, etc.

Many such lists of businesses are so off target that they are worthless. (One of my clients reported the promoter sent a promotion package to a dog grooming parlor.)

And when the promoter receives no response, he or she says something like, “We can’t understand why we’re not getting any interest.” You get commiserating, not results.

My assessment is based on the many tales of woe I’ve heard during the past 22 years I have

mentored inventors. There may be promotion businesses about which I haven’t yet received favorable feedback, but I’m not betting on it.

Don’t forget the ‘what if?’

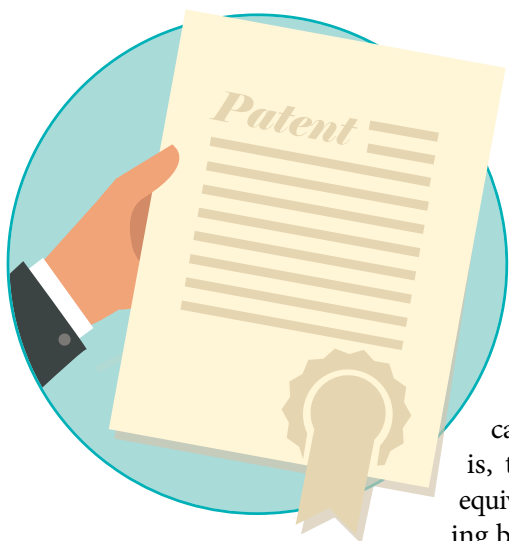
You can do for yourself what promoters advertise they’ll do for you. Most important is a professional sell-sheet and a patent.

If your patent is still in process at the patent office, your position is much weaker than if it has issued. But some potential licensees may prefer to gamble on your application maturing into a solid patent.

Any licensing agreement, however, must have at least one “What if?” clause.

Because many patent applications don’t result in an issued patent, usually because the patent examiner finds prior art not found by the patent attorney, the licensee must ask, “What if prior art negates the issuance of the patent?” Or, “what if” the claims that cover the invention’s commercially valuable features are shot down by the patent examiner, and only trivial claims are allowed in the issued patent?

In other words, the tentative licensee must self-protect from getting stuck with a weak patent or the patent office’s final rejection of the patent application.



In my opinion, it is malpractice for a licensing agent or promoter to accept you as a paying client unless you have your issued patent in your hands.

Agents who work for inventors are typically self-defined. That is, they don't have the equivalent of a state licensing board through which

real estate agents must be qualified and licensed.

At first glance, The Licensing Executive Society would seem to be the ideal organization through which inventors could engage legitimate licensing agents. However, that organization appears to handle (from its website) "... orderly transfer of intellectual property rights; protection and management of intellectual capital ..." etc. for businesses that engineer products.

In other words, its 8,000 members in 90 countries most likely refuse the licensing of inventions from independent inventors who have not formed and developed a credible business, and whose inventions have not proved their value through substantial sales.

I have known three honest agents who operated without upfront fees, and two of them had to give up agenting in less than two years because the monetary returns were unpredictable and too far out in time. The third was a successful inventor with income from royalties on one of his inventions.

Have a patent first

So, have I disrupted your dream?

Sorry, but the reality of having someone take over the hard work of evaluating and licensing your patent is a pie in the sky in my opinion.

It's a variation of the inquiries I occasionally get from inexperienced inventors.

A typical email reads: "I'm an inventor. I have great ideas every day. I know they're marketable.

What I need is a partner to take over getting the inventions to market."

In other words, the inventor wants to sit on his butt, daydream, and delegate 98 percent of the work so that he or she can concentrate on the fun part in exchange for sharing royalties 50-50.

Inventing is hard work. I won't take space to enumerate all the steps involved before the first income is received, but many of these steps should be done by the inventor—especially the preliminary patent search and product search, and the market evaluation. These tasks alert the inventor to the changes needed in their original concept, or even the need to totally abandon the concept because it is not sufficiently novel to qualify for a patent.

One last caution: In my opinion, it is malpractice for a licensing agent or promoter, or similar service by any other name, to accept you as a paying client unless you have your issued patent in your hands.

A licensing agent is motivated by money, and you may be the lowest icon on his or her totem pole. Only you have the pride of originality that will keep you steadily on the path to the market.

A partner might help, but that's a whole nother article. (Yes, nother is now a word in the Merriam-Webster dictionary. It "ain't" proper, but it's popular.) 🍷

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



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Maxing Out LinkedIn

AT YEAR'S END, 8 STEPS FOR RECONSIDERING HOW YOU MARKET YOUR INVENTION WITH THE PLATFORM **BY ELIZABETH BREEDLOVE**

HAVE YOU considered your presence on LinkedIn recently? The popular business networking site is an opportunity for networking, learning more about your industry, marketing your invention or company and much more.

In the September 2020 *Inventors Digest*, I wrote about how LinkedIn is great for inventor-marketers who have little to no advertising budget. The story included four steps to help your business build exposure through that means.

Now, consider eight tips for refining your LinkedIn strategy.

1 Make valuable connections. Your college friends and co-workers are a great start, but you also should focus on connecting with people relevant to your area of expertise.

Seek second-degree connections—people connected to people you're connected with—and you'll likely see them liking, commenting on and sharing content within your news feed. Note those interacting with it. These people are likely valuable connections for you.

2 Get followers talking. Provide your connections with value by posting content they care about. Running low on content ideas? Consider:

- Posting a link to a new blog post or article on your site, with your thoughts about it.
- Sharing company news and updates such as new product launches, new employees, funding rounds and more.
- Discussing personal news and updates, such as career milestones or completion of new degrees or certifications.
- Sharing a tip related to your work or industry.
- Discussing something that has been inspiring you lately, such as a book, podcast, photo or even a thought.
- Asking a question to spark engagement. For example, ask for feedback about your invention.
- Sparking debate by posting something somewhat “controversial,” such as an unpopular opinion about inventing.
- Sharing a list of relatable information, such as five books that have had the biggest impact on your career as an inventor.

Be an active participant instead of falling into the habit of passively scrolling through.



3 Curate your own LinkedIn feed so you see only the information that has the most interest for you.

The site prioritizes content as people you know, talking about the things you care about. Show LinkedIn what you care about so that you see content from those you more want to engage with—or those you hope notice and engage with you as well.

If you see a post you aren't interested in, click the three dots at the top right of the post. From there, you can hide the post or even unfollow the person who posted it. Actions like these tell LinkedIn what content you're most interested in seeing and help tailor your feed to you.

If you want to take it a step further, click the three dots at the top right of any post and select "Improve my Feed." This will take you to a page full of suggestions of people, businesses and hashtags you may be interested in following.

4 Participate in LinkedIn groups. Using the search bar to find a topic that interests you. As you start to type in your search terms, you should see a suggestion pop up for "[search term] in groups." Click that and you'll be taken to a page full of suggested groups to join.

Once you join, look for opportunities to participate in group discussion. Don't be overly promotional. Your here is to network, make connections and learn more about your industry.

5 Use LinkedIn events. With this feature you can find events to go to, publicize your events, and make connections with those who attend the same events as you.

To create your own event, from your home page scroll down until you see the word "events" on the left side of the page. Then click the plus sign to start creating your own event. You'll also see a list of the events you're attending.

6 Follow hashtags to expand your news feed and broaden the content you see.

To begin, search a hashtag you're interested in by using the search bar. From there, you can follow the hashtag or browse to see what others are posting using the hashtag.

This is a great way to find new connections and see what types of content others are posting. You may even be able to gather a little intel about your competition in these posts!

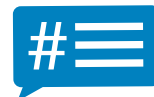
7 Stay consistently active. To get the most out of LinkedIn, you must make the platform a part of your daily or weekly routine. Devote time several times a week—each day, if possible—to check messages and notifications, and scroll through the feed looking for potentially interactive content. Be an active participant instead of falling into the habit of passively scrolling through.

8 Keep tabs using the LinkedIn dashboard.

The LinkedIn dashboard is located on your profile, below the About and Featured sections. It shows you who viewed your profile, how many people viewed your posts or articles, and how many times you've appeared in searches.

If you click each of these stats, you'll get a deeper look at this information. You can use this data in a variety of ways:

- Look for peaks in views, and see if you can spot any correlations between the frequency or type of content you're posting. Use this to guide your strategy.
- Examine who is seeing your profile in their searches. Are these people in your industry? Are they people who could be connections? Do you need to change anything about your profile to shift the demographic of people finding you in searches?
- Consider who is looking at your profile. Are you providing value to them? Can you change something about your posting strategy to get them more interested? 📌



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.



Getting **Fully Empty**

MAN'S CAP SYSTEM HELPS GET EVERY DROP
FROM FOOD AND OTHER CONTAINERS **BY EDITH G. TOLCHIN**

BURGERS AND dogs hot off the grill. Table is set. You're about to get the condiments from the fridge.

Oh, no! You have less than an inch of product left in your ketchup, mustard, and mayo squeeze bottles. Now you must invert the bottles and wait while your dinner gets cold.

Enter the Flip-it Bottle-Emptying Kit™. Although you should do a better job with that grocery list, you won't have to fret about missing these few items at the supermarket or pharmacy.

Edith G. Tolchin (EGT): How did the Flip-it® Bottle-Emptying Kit come about? When did you get that “aha!” moment?

Steven Epstein (SE): One winter night in 2014, I went to pump Lubriderm lotion and the pump sputtered and quit. Like most people would, I flipped the bottle and wedged it into the corner of my vanity to keep it from falling over.

The next night, I went to get the lotion but naturally I had to remove the pump to access the lotion. The first problem was, “Where do I put the wet, sticky pump that isn't a place I'm going to have to clean afterwards?”

Answer (you guessed it): in the sink. I dealt with using the lotion, careful not to turn the bottle back right side up in doing so, and cleaned up the messy sink.

As I was re-installing the pump (because there was still an inch of lotion in the bottle), I realized “I'm going to have to go through this over and over ... there's got to be a better way!” Voila—I had the “aha!” moment and Flip-It! was born.

EGT: Exactly how does it work? Does it fit all different-size caps?

SE: Flip-It is super simple. It harnesses the greatest renewable source of energy of all: gravity. By standing bottles upside down on a secure base, gravity brings the remaining product to the bottle's opening where the user simply pulls open a valve and squeezes out what they need ... no more, no less. No more shaking or pounding, balancing acts, or cutting open.

I know from my background in contract manufacturing that bottle threads, with few exceptions, are standard around the world ... the same way green means “go” and red means “stop” wherever you are, threads on bottles follow industry standards. This allows Flip-It! to function anywhere on the planet.

Having said that, of all bottle threads, there are really four sizes that are the most used, and those sizes are in every set we sell. As time went on, we received requests for the next two smaller sizes down (think travel size and hotel amenity items).

“Flip-It! harnesses the greatest renewable source of energy of all: gravity.” —STEVEN EPSTEIN



We also created an adapter to fit arguably the most common non-standard thread of all, that of Nivea®, Eucerin® and Aquaphor®, all made by the same company in Europe. People who use those brands love them, and we're happy to provide them with a way to get every drop they paid for!

An important word about sustainability: Only about 10 percent of bottles actually get recycled, the rest ending up in landfills and oceans. When people dispose of bottles with remnant product inside (soap, lotion, adhesive, oil, etc..) those remnants are free to leach out into the environment in the form of pollution.

For the increasing number of municipalities requiring residents to rinse out their bottles, Flip-It! reduces the amount of water (another precious resource) required and prevents the creation of a liquid waste stream.

EGT: Have you ever invented anything before? Tell us about your background.

SE: I grew up in a family manufacturing/distribution business, the youngest of four boys, and started working when I was 12.

In college, I became a helicopter pilot and am an ATP (airline transport pilot). I responded to the earthquake in Haiti in 2010 by piloting a helicopter filled with medicine and food to Haiti from New Jersey, back and forth three times.

Yes, I've invented other things—none as important as the Flip-It!, though: a one-handed baby bottle feeder to allow the feeder to have their other hand free, a puzzle that taught young kids the QWERTY keyboard layout, and other things.

EGT: Where are you manufacturing? Any communication difficulties or quality control issues?

SE: Flip-It! is manufactured in China. I am fortunate to have started a relationship with a custom packaging vendor, Jansy Packaging, which had the design and manufacturing resources to help me prototype and tweak the design into the product now on the market. Thanks to their

support, we've had an excellent supply chain and no quality issues.

EGT: What about finding a competent factory to create the molds? Do you need to use an FDA-grade plastic?

SE: Disposable “unit tool” molds, designed to mimic production molds but at a fraction of the cost (and durability), were made first in order to tweak the designs. Once we had that figured out, production molds were made very quickly and put into service.

The original plastic we used was somewhat brittle and a few customers complained that if dropped, the legs of the tripod were prone to breaking off. We satisfied those customers with replacement goods but changed the plastic to something more pliable, which eliminated the issue completely. Because we suggest using Flip-It! on food items, we have to use virgin plastic that has been tested to be BPA free, food grade, and dishwasher-safe.

EGT: Because this product comes in contact with food, what type of quality control tests are performed?

SE: Claims about Flip-It! (food grade safe, BPA free and dishwasher safe) have been tested and verified on several occasions by independent third-party labs, Intertek and SGS. They are the world's leading inspection, verification, testing and certification companies.

Their product performance testing ensures our product claims are compliant with the



After standing the bottle upside down on a secure base, the remaining product drops to the opening where the user pulls open a valve and squeezes out what is needed.

appropriate regulations and supported by scientific evidence.

EGT: Please tell us about your experience on “Shark Tank.”

SE: I had applied twice prior to being accepted. The third time I bit the bullet and went to an open call in New York City in May 2018 and stood in line for hours outside, then hours inside, to deliver my 2-minute elevator pitch.

Two excruciating months went by with no contact from “Shark Tank,” until one day in early July an email popped up congratulating me on moving forward in the process. I literally jumped for joy, fist pumped, and shouted out. I was super excited.

I spent months preparing, practicing and focusing. I was not pleased with the outcome (no deal) and certainly not pleased with the edit, which left most of my message of saving the earth on the cutting room floor—all making me look less than competent.

I had not done \$2.5 million in sales nor appeared on QVC 65 times by making excuses; I did it by working hard, working smart, and having a great product that appeals to people, is affordably priced, and solves a real problem. But such is reality TV.

EGT: What advice do you have on developing a food-grade product?

SE: It’s important to have 100 percent faith and confidence in your manufacturing partner, and to budget at least \$10,000 to cover testing costs. ☺

Details: flipitcap.com

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.



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Open for Flavor

MAN'S BEVERAGE OPENER REMOVES THE ENTIRE TOP OF A CAN, ENHANCING THE CRAFT BEER EXPERIENCE **BY JEREMY LOSAW**

IT WAS SHOCKING. It was crude. And it was the inspiration for invention.

Armand Ferranti was enjoying a beer with a friend from flight school in 2000 when the buddy showed him how to open a can with his teeth. He pushed his canine tooth through the aluminum can and was able to remove the entire lid.

As the classic disclaimer says: Don't try this at home. (Or anywhere.)

"It was pretty barbaric, but I do recall the experience of drinking the beer once the top was off ... being significantly better, and that stuck with me for a while," Ferranti said.

Approximately 10 years later, he was drinking a beer at a family event and noticed the foil cutter being used on a wine bottle. He wondered whether it would be possible to make a tool in the manner of the foil cutter that could remove the lid from a beer can and be part of the home bar ecosystem.

Ferranti's 15-year journey resulted in the Draft Top, a beverage opener that turns a can into a mug.

The pocket-size tool fits over the lid of standard cans and with a turn of the wrist, cutting the lid from the can. The lid is then pushed into the beverage to leave a rolled edge that is comfortable for drinking. It can be used on any canned drink that has the standard ringtop lid, making it great for enjoying the full palette of flavors from a craft beer or a way to make a cocktail from a soft drink.

Stumbling early steps

Beer has been available in cans for about 90 years. Bottles and kegs were long the exclusive method of beer delivery, but cans offered the benefits of being lightweight and easier to manufacture in post-industrial times.

The first cans were essentially glorified soup cans made from tin and required a churchkey to open. They evolved to feature a cone top that sealed with a bottle cap, and eventually the now-ubiquitous ring pull tab.

Despite the innovation in beer cans over the years, they

Watching a buddy open an entire aluminum can top with his teeth gave Armand Ferranti the inspiration for Draft Top.



Armand Ferranti spent \$1,200 on his first prototype. “It was horrible. I was incredibly discouraged.” So he changed his tactics.

all have a tiny orifice that causes the beverage to “glug” and limits the aromas of the beverage from reaching your nose. This deficiency inspired Ferranti.

His first goal was to prototype a lid-cutting device. Then in flight mechanic school in New Jersey, he started playing with different materials to explore their properties.

Ferranti went to a liquor store to measure the dimensions of beer cans. He then started using Google Sketchup to create CAD designs of his tool concepts.

These files were then sent to an engineer who converted them into SolidWorks (CAD software) files that could then be used to machine prototypes.

Ferranti spent \$1,200 on the first prototype. It did not work at all.

“It was horrible. I was incredibly discouraged,” Ferranti said. “I cannot keep iterating at \$1,200 a pop.”

He changed his tactics. He had experience making things with metal, so he installed a lathe and other equipment in his house to make the parts himself. It would often take 4 hours to finish a prototype iteration, but the new capability helped his budget tremendously.

Progress and crowdfunding

Eventually, he found a blade geometry that worked. Ferranti was ready to talk to factories about having his creations made in bulk. The design was an elegant steel blade with a wood handle and seemed easy enough for a factory with decent capabilities to make.

He was shocked when a factory in New Jersey came back with a unit price of \$43.75 each.



Despite the huge cost of goods, he decided to launch the product with a \$45 retail price on Kickstarter to see whether there was a market for the product.

The campaign, launched in 2015, was a resounding success with 3,199 backers who pledged \$214,083. Obviously he was going to lose money if he made his product with the factory in New Jersey, but he found a Chinese manufacturer that would make them for about half the price. After a year of manufacturing development, the product was shipped to backers.

The patent process took about 5 years. Before Ferranti was patent pending, he used NDAs (nondisclosure agreements) when talking to prototyping houses and factories. Eventually, patents were filed; family friends in IP law helped him with the filing to keep costs low.

Although there was nothing in the beverage industry that was similar, he had to work around existing patents in disparate fields such as pipe cutting. The patents were finally issued in 2019. They have been a great help in combating counterfeit products that have hit the market in the last few years.

A lull before new sparks

Despite the success with the Kickstarter campaign, the product went into remission for a time. The product had massive potential, but Ferranti was



After Draft Top removes the entire lid of a can, you can use it as a way to make a cocktail.

starting a family and there was not enough time to continue development in the way he had been.

Eventually, two things happened that helped restore progress. He bought a consumer-grade 3D printer, which allowed him to rapidly iterate on new designs. He also brought an engineer onto the team to lend some expertise and ramp up testing.

This culminated in an all-new design that became the company's flagship product (it also sells accessories such as can covers and insulating sleeves). Once that was completed, Ferranti went back to Kickstarter to launch the new version. Fueled by the rise of the craft beer culture, this campaign was an even bigger success with 16,735 backers who raised \$595,789.

Now that the product has proven to be a success for a second time, Ferranti is not slowing down.

A plastic version of the product is nearly ready for production, and work has begun on another version that uses wood and metal for a more craftsman feel. Other planned line extensions will add additional SKUs to the family and open new lines of business.

Work on brand placement is ongoing. The company partnered with the sports blog Barstool Sports to raise additional awareness for the product.

Ferranti is determined to keep showing people that there is a better way to experience beer from a can. ☘

Details: drafttop.com

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



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Packaging Strategies

TEXT, GRAPHIC DESIGN AND PHYSICAL STRUCTURE ARE KEYS BEFORE PRODUCT DISTRIBUTION

BY DON DEBELAK



NEW INVENTORS often make the mistake of ignoring packaging and marketing until they have spent a ton of money getting ready to manufacture their product.

When you start to market and distribute your product, you are asking people to invest their own money and resources in your product. One of their primary concerns is the package—how well it sells and protects the product, and how well it fits into the distribution channel. For a retail product, for instance, will the package hang from a hook, sit in a bin, or be on a shelf?

The other big concern, especially with lower-cost products, is packaging cost. Because normally you need to mark up products four times to cover its cost, that means a 50-cent package will raise the retail price of a product by \$2.

A powerful package

A new product gets only a second or two to sell its advantages. A retailer won't put a product on the shelf unless it can sell itself in that time—either because it meets a need people have or provides a new and unexpected benefit. Your primary focus should be on these three areas:

Copy: Determine what will be written on the package before you dig deep into the design. Space is limited, so be brief and figure out a hierarchy.

Leave room for the brand name, the company name, a slogan or tagline (if desired), some quick but important benefits and descriptions and any supplementary copy (instructions, storage info, warnings, etc.).

Copy is a branding tool where you can be creative. You may consider consulting a copywriter.

Graphic design: Graphics compel the audience and quickly communicate significance.

They can either be printed on the packaging materials or may appear on a label or tag.

The basic design essentials are: color, typography, composition, logo use and development, photo and illustration use, and overall style/concept. This is another area where research is important.

Structure and materials: How will the package be shaped? Will it be lightweight (more display options this way), or heavier? Which materials will be included in the packaging? Obviously, some materials will cost more than others and will figure into your budgeting.

Evaluating options

Take four packages of similar size and similar-priced products for your market. Then ask a group of friends what they like or don't like about that package. Include both the package itself and the package graphics.

Ask how long it takes them to figure out what the product is. See what words they like or don't like. Make necessary changes before you talk to graphic artists (who create the sell sheet) and packaging companies (who make the physical package) in your area.

For more help, check with SCORE (score.org) or your local Small Business Development Center. Both groups offer free consulting with experts in the field; they might have a packaging person who can help you. ☎

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.





FOOD FIGHT

LOVE OF FAMILY INSPIRES
MARK CUBAN'S MISSION TO
PREVENT ALLERGIES IN INFANTS

BY REID CREAGER

YOU MAY NOT ALWAYS AGREE WITH MARK CUBAN, but you always know where he stands. And the specter of risk to his family's health is not something he will take lying down.

The controversial billionaire entrepreneur, owner of the NBA's Dallas Mavericks, media proprietor—and inventor—has a daughter with a severe peanut allergy. This merits constant monitoring by Cuban and his wife, Tiffany Stewart.

"We always have to be vigilant about what foods we eat and having an EpiPen always available," he told *Inventors Digest*, referring to a hypodermic device that administers a dose of epinephrine in the emergency treatment of an acute allergic reaction.

"While it's a source of stress and worry, we're lucky enough to have the resources to help deal with it, and I can't imagine how much more difficult it would be if we weren't able to afford specialty foods, medication and more. The difficulty and long-term stress of dealing with food allergies means focusing on preventing those food allergies is even more important."

In January, Los Angeles-based startup Ready, Set, Food! made a pitch on TV's "Shark Tank"—where Cuban appears as an investor. The company makes a daily infant supplement with a mission to save about 200,000 infants per year from developing food allergies.

Ready, Set, Food! dissolves in breast milk or formula in order to make it easy for parents to give their babies accurate, regular doses of peanut, egg and milk. The process starts as early as 4 months

old and continues for an average of six months, although it can take less time if the child starts eating solid foods sooner.

Cuban invested in \$350,000 in the Los Angeles-based startup, founded in 2017 by doctors, scientists, parents and entrepreneurs. In July, Ready, Set, Food! announced that it raised a \$3 million funding round led by Cuban as well as Danone Manifesto Ventures and AF Ventures. That investment followed the company's \$2.2 million funding round in 2019.

Billionaire entrepreneur Mark Cuban invested \$350,000 in Ready, Set, Food! as an investor on "Shark Tank" in January. The product dissolves in breast milk or formula in order to make it easy for parents to give their babies accurate, regular doses of peanut, egg and milk.

MARK CUBAN

Born: Pittsburgh

Home: Dallas

Family: Wife Tiffany Stewart; children Alexis Sofia, Alyssa, Jake

Education: University of Pittsburgh, Indiana University; Bachelor of Science in management, Kelley School of Business

Major business holdings: Owner, Dallas Mavericks (2011 NBA champions); co-owner, 2929 Entertainment, which owns Magnolia Pictures, Landmark Theaters and Truly Indie; Radical Investments LLC

Charitable organizations: Mark Cuban Foundation; includes Fallen Patriot Fund, for families of U.S. military personnel injured or killed in Iraq war

Favorite invention: The semiconductor



No hesitation

If you've ever watched the maverick Mavericks owner in the stands during one of his team's games, you know that when Mark Cuban is excited, things often happen in a hurry.

After his "Shark Tank" offer was accepted and the investment finalized, "our goal became to get Ready, Set, Food! and food allergy prevention to as many families as possible. An important next step was partnering with health systems like Advocate Aurora to help provide food allergy prevention education to as many parents as possible.

"At Advocate Aurora alone, we're helping 36,000-plus babies per year, and we're also in talks with many other similar health systems to help implement food allergy prevention."

Their urgency is buttressed by some daunting data from Food Allergy Research & Education:

- Approximately 32 million people in the United States have food allergies.
- Results from a 2015-2016 survey of more than 38,000 children indicate that 5.6 million children, or nearly 8 percent, have food allergies. That's 1 in every 12-13 children.
- The Centers for Disease Control & Prevention reports that between 1997 and 1999 and 2009 and 2011, food allergy prevalence among children increased by 50 percent.
- In the United States, the prevalence of childhood peanut or tree nut allergy appeared to more than triple between 1997 and 2008.
- More than 170 foods have been reported to cause reactions in the United States.
- Eight major food allergens—milk, egg, peanut, tree nuts, wheat, soy, fish and crustacean shellfish—are responsible for most of the serious food allergy reactions in the United States.
- The most common food allergies in children are allergies to peanut, milk, shellfish and tree nut.

Such information intensifies Ready, Set, Food!'s goal of helping at-risk families.

Per the company website, qualifying families can receive a free 6-month subscription to the program in addition to ongoing support from its team of food allergy experts. Qualifying families with a 3-11-month old include: families who

"We want the ability to live a life free of food allergies to not only be an opportunity for well-off families but for every family." —MARK CUBAN

Cuban says the mission is about preventing allergies as well as educating parents.



have lost their income due to COVID-19; SNAP-eligible families (the Supplemental Nutrition Assistance Program); and EBT-eligible families (electronic benefit transfers in the Pandemic-EBT program, which provides low-income families with money to replace the free or reduced-price meals their children would have received in school).

"I'm very excited about their program to offer free products for needy families," Cuban said. "We want the ability to live a life free of food allergies to not only be an opportunity for well-off families but for every family."

Good IP sense

The company's intellectual property acuity also impressed Cuban, a named inventor of 11 patent families and 23 distinct patent publications for his inventions.

"Ready, Set, Food! has a patent, recently awarded, on introducing multiple allergens through a bottle for the purpose of helping to prevent food allergies. Their IP is a fantastic asset because the new USDA guidelines report recommends that all babies eat peanut and egg starting at 4 months of age—and Ready, Set, Food! has a patent on the easiest way to follow those guidelines."

But it's the entire company mission that impresses Cuban. He's similarly drawn to businesses such as Luminaid, which provides lighting to disaster areas, and Mahmee, a maternal health care tech business.

"While intellectual property can be valuable and important, it is just a complement to a well-thought-out and executed strategy, not a replacement for one." 🐼

Details: readyssetfood.com

SAID IT

HE

"Never stop learning. Never stop grinding. Never stop loving every single minute of your life."

"I think people are tired of politics as usual. We're tired of everything being scripted; we're tired of every comment being politically correct."

"One of the great lies of life is, 'Follow your passions.' Instead of focusing on your passions, pay attention to those things you devote time and energy to. Those tend to be the things you're good at. ... Don't follow your passions. Follow your effort."

"I was born to sell it as a kid. I think it's partially innate, and partly it's because my parents were always very clear: If I needed anything that wasn't a necessity, I was going to have to save my money and buy it myself. That meant not only did I have to buy basketball shoes, but I had to figure out how to pay for college as well."



Cuban meets Ready, Set, Food! cofounder Dr. Andrew Leitner, cofounder/CEO Daniel Zakowski (left) and Chief Allergist Dr. Katie Marks-Cogan.

A JOB HISTORY YOU COULD NOT MAKE UP

- Growing up, Cuban's jobs included selling stamps door to door, box boy, installing carpet and slicing meat at a deli. "I was chopping chip-chopped ham," he said on a 2019 episode of GQ's "Actually Me." "I wasn't paying attention and this finger went right into the blade that was spinning around and chopped off the end of my finger. It went flying, I'm bleeding everywhere. That job ended like that."
- "I got paid \$25 an hour ... to teach (disco) dancing to sororities," he said on a podcast. "It was the best job ever."
- After moving to Texas, Cuban worked for a computer software company and was fired for closing a \$15,000 sale instead of cleaning up. So he started his own computer consulting service, MicroSolutions, which he sold for \$6 million in 1990.
- He later cofounded another company called Audionet, which became Broadcast.com and was acquired by Yahoo for \$5.7 billion in 1999. That made Cuban a billionaire at 40.

SURPRISE! She's an Entrepreneur

CLASS AT STANFORD CHANGED
WOMAN'S CAREER FOCUS,
LAUNCHED FEMALE CARE PRODUCT

BY RACHELLE MULUMBA

Greta Meyer is cofounder and CEO of Sequel, a female-led startup committed to designing women's care products that began with re-engineering the tampon.

She was born and raised in Philadelphia. In 2019 she graduated from Stanford University, where she played lacrosse and studied engineering product design. A senior class, Technology Entrepreneurship, altered her graduation plans and helped launch her invention and entrepreneurship journey.

This interview has been edited and condensed for brevity and clarity.

Tell me about your product, Tempo, and the problem you're trying to solve.

In the Technology Entrepreneurship class where I was in a group with one girl (Sequel cofounder Amanda Calabrese) and four boys, we took a critical look at products related to the menstrual experience. We performed over 200 interviews to try to figure out common threads among women, and we found a lot of distrust and anxiety stemming from product failure. If a tampon is weak, it produces stress while it's in use even if it's not leaking.

I can attest to this. While playing sports in high school and college, I would always feel the need to ask a teammate to check to see if

my white shorts were OK. That anxiety was a problem we were convinced we could solve with better engineering.

Looking at the data, we found that users were removing tampons because they were leaking, but only 15 percent to 25 percent of the fibers had actually been used due to the phenomenon where liquid is funneled away from the core and down the tampon's linear channels.

So, we created a different design that's helical or spiral in nature. Think of a straight water slide versus a curly water slide.

The flow path is longer with the curly slide, which is why it takes longer to slide down. The initial tests of our tampons show that they are 8.5 times slower to leak. This flagship product fundamentally changes how tampons work and can remove the anxiety that comes with their use.

You talked about conducting your own extensive research. Did you find problems with research that already existed?

We found that there was research around people's habits with respect to menstrual cycles but not specifically to tampons. We took it upon ourselves to conduct interviews so we could control the questions being asked. We've since conducted thousands of additional surveys as we realized our initial research was focused on the people around us—active, college-age women.

Now we have better representation when it comes to socio-economic class, age and occupation in order to understand what the needs truly are.

What insights did you uncover when you expanded your user research?

People are very creative around how they approach this issue. Because there's little product innovation, users are innovating to make their days less troubling. They're either wearing a backup pad or wearing period underwear in conjunction with a tampon.

We know there are women in boardrooms who reorganize their day so they have time to check their tampon. It surprised us that no companies are addressing an issue that many people are dealing with every day.

"I never thought that I'd be the one to start my own company. ... Stanford provided an environment with mentors and role models who encouraged me to go down this road." —GRETA MEYER

Why do you think there's been so little innovation in the space of women's care?

I think it's because menstruation is a taboo subject. Women had never been asked for their stories about leaking and negative experiences, but when we did they were more than happy to share. Simply talking about it diminishes the taboo, which will lead to more innovation in the future.

Was entrepreneurship something in which you always had an interest?

I never thought that I'd be the one to start my own company. I was planning on going into product management and had my start date lined up after graduation, but I began this project in the fall of my senior year. After we pitched it during class, one of the judges recommended that we look into patenting and come back to him, and he turned out to be our lead investor.

Stanford provided an environment with mentors and role models who encouraged me to go down this road. It's been hugely rewarding as I get to do so much, from marketing to managing the supply chain. It keeps me on my toes. No day is the same, and I really enjoy it.

You touched on patents and trademarks. Tell me about the role IP has played in your business.

I previously worked at Comcast, where I learned a lot about IP while developing software solutions for their product AI group. There, I went through the patent process and got the experience.

So for Tempo, we worked with a Stanford professor to get our provisional patent application, which we knew was going to be fundamental to our success because of the size of



our startup versus the size of the incumbents in this space.

How important is it to have IP protection opportunities available on campus?

We were very fortunate because we were undergrads, which allowed us to keep full ownership of what we developed. If I was a grad student, Stanford would have more of a claim to our IP.

We were also fortunate that my mom is a lawyer, which has helped us find that right counsel for a variety of issues. I've heard stories of people who had positive experiences with the Office of Technology at their university, but also the converse.

What or who inspires you?

I sometimes look at our early work and prototypes, and I am really proud of how far we've come. That really inspires me to work harder for the future.

Someone I respect in this space is Claire Coder. She founded the company Aunt Flow. She's very driven and has accomplished amazing things all by herself. She's paved the way and showed both

venture capitalists and the media that not only is this space something that deserves more equality, it's also a huge investment opportunity when considering the size of the market.

Books and podcasts have also influenced my journey. A classic is the NPR podcast "How I Built This," with Guy Raz; also, the podcast a16z, which comes from Andreessen Horowitz. They both are great for discovering new entrepreneurial stories.

What's the impact of having other female founders or mentors?

We've been lucky to have a lot of mentors. We're part of StartX, which has a specific group just for female founders. Although we're all working on different solutions, just finding other women leading startups is very encouraging.

I just got an email back from a female founder I cold-called looking for advice on bringing a product to market, which is something she just accomplished. Having people like that to turn to is critical for building confidence and success.

We can all get stronger together. I've experienced more collaboration than competition, even from entrepreneurs within the tampon market.

What's next for Sequel?

Right now, we're holding a product pilot in the UK. We're also looking to bring the Tempo tampon to the U.S. market by the end of this year. And we have other innovations for products like women's deodorant that we want to explore.

Finally, as a result of supply chain changes due to COVID-19, we're bringing manufacturing to the U.S., which is really exciting. 🇺🇸

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



GRETA MEYER

Occupation: Cofounder and CEO, Sequel

Hometown: Philadelphia

Education: Germantown Friends School, Stanford University (Bachelor of Science)

Engineering specialty: Product design

Person most admired: Sallie Krawcheck (CEO and cofounder of Ellevest, a digital financial adviser for women)

Favorite quote: "The greatest mistake you can make in life is to be continually fearing you will make one"—Elbert Hubbard

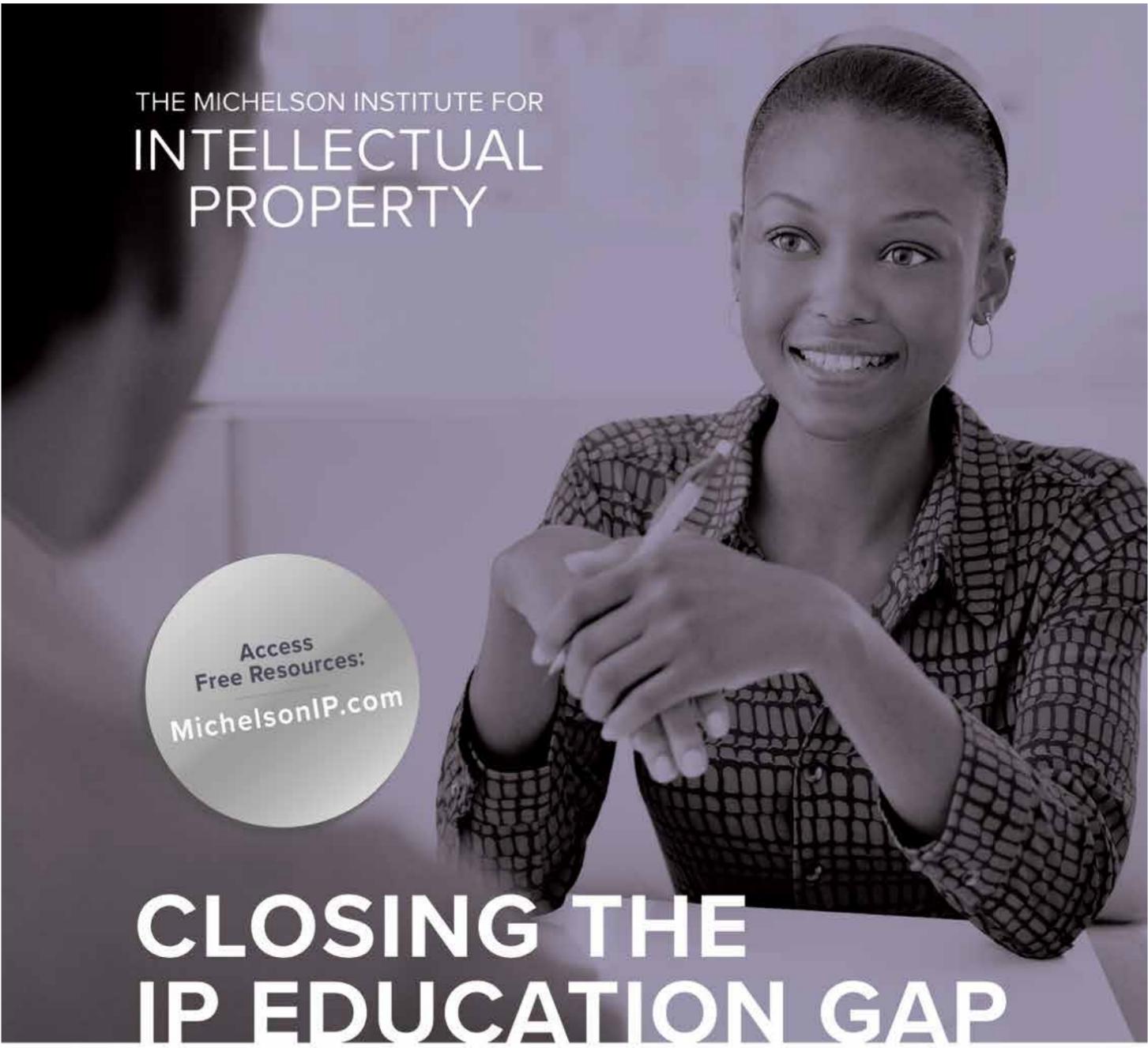
Favorite book: "The Undoing Project," by Michael Lewis

Favorite food: Mint chocolate chip ice cream

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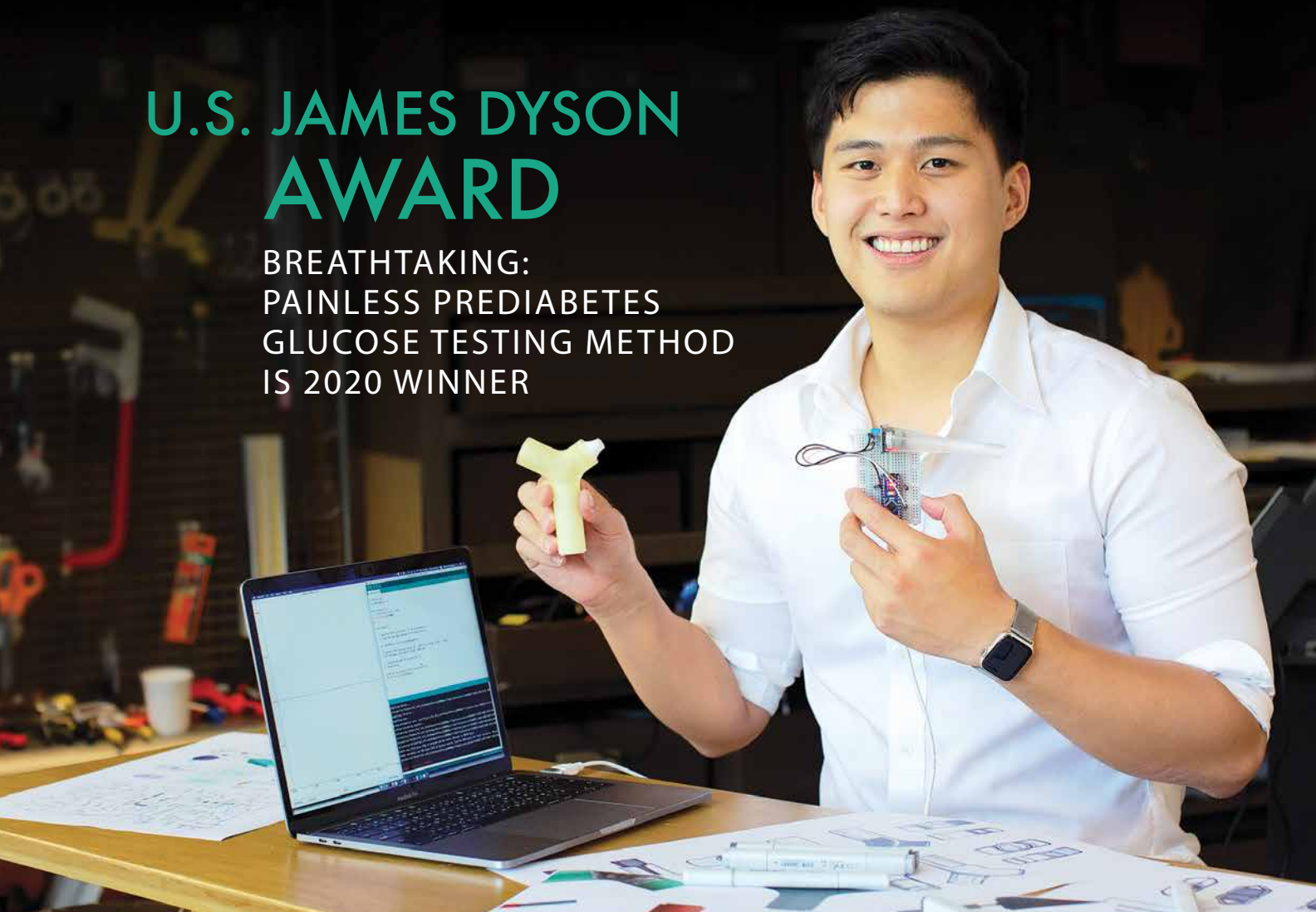
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THE MICHELSON 20MM
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U.S. JAMES DYSON AWARD

BREATHTAKING:
PAINLESS PREDIABETES
GLUCOSE TESTING METHOD
IS 2020 WINNER



NO MORE FINGER PRICKING. This year's U.S. James Dyson Award winner, Thipok (Poom) Cholsaipant, invented the world's first breath glucometer for people living with prediabetes. AeroLyze simplifies the testing process and eliminates the invasive, painful and outdated finger-pricking testing method.

The smartphone- and smartwatch-pairing glucometer will allow those living with prediabetes to test and monitor their glucose levels with one breath.

The key to the invention is acetone, a compound released when the body burns fat. It gives prediabetics a distinct breath smell. The palm-size inhaler performs breath acetone analysis to determine your blood glucose levels.

More acetone in the breath means the body is burning more fat. Lower levels of acetone means higher blood glucose.

Family inspiration

An award-winning industrial designer from Seattle, Cholsaipant grew up in a family who found immense value in uncovering solutions to everyday problems. One problem existed within his family that millions of Americans battle today: Type 2 diabetes.

The United States Centers for Disease Control and Prevention says 34.2 million Americans—just over 1 in 10—have diabetes; 88 million American adults (1 in 3) have prediabetes.

Cholsaipant was inspired to invent after seeing his father suffer from diabetes-related ailments.

In coming up with breath analysis, he explained that it “shows the most significant potential because it can be taken on the fly, produces no waste and near-instant results. Plus, deep breathing is an excellent affordance for a positive experience.”

Thipok (Poom) Cholsaipant invented the world's first breath glucometer for people living with prediabetes.

PHOTOS COURTESY OF DYSON

The device comes in a small avatar that fits in a pocket, with a strap that makes it easy to carry around your wrist. Just breathe into it, and an LED tells whether sugar levels are high, optimum or low.

Rather than giving accurate readings that may fluctuate based on time, AeroLyze presents data in a way that is less worrisome and more actionable.

A broader goal

Cholsaipant wants AeroLyze to evolve and be useful for all people living with diabetes, but he began with people living with prediabetes because this glucometer focuses on making testing simpler to help prevent the disease at an earlier stage.

AeroLyze is unlike any other glucometer because it focuses on the experience of the user. It uses a rating scale interface instead of a digital reading to reduce anxiety and misinterpretation around fluctuating blood glucose levels.

“The current process for measuring blood sugar levels is a long, painful ritual for just a mere glimpse at a three-digit number,” Cholsaipant said. “I believe humans are built from experiences, not just numbers.”

His invention ranked first among 150 U.S. entries—a record-breaking year for the competition.

Winning the United States portion of the James Dyson Award earned him \$2,500. With the prize money, he plans to finalize his prototype, patent AeroLyze and advance the tool’s machine learning to form predictions based on users’ habits to alert them when they might be reaching dangerous glucose levels.

‘Should totally exist’

U.S. James Dyson Award Judge Sam Sheffer said: “When reviewing the long list of super compelling entries this year, AeroLyze stuck out to me. It’s a really good idea that somehow hasn’t been created yet.

“My initial reaction was, ‘This is smart and should totally exist.’ I’m glad that Poom won—and I’m looking forward to the day it’s available on store shelves.”

AeroLyze moves to the international stage of the James Dyson Award along with the other two finalists in this year’s U.S. competition: SIP™ Safety Accessory and Carbyn.

SafeBVM, a medical device startup from Georgia Tech, built the SIP Safety Accessory to the manual resuscitator to reduce morbidity and mortality as a result of unsafe manual ventilation. It ensures that every time a provider squeezes the resuscitation bag, the crucial parameters of airflow generated and delivered are safe and optimal.

Carbyn, invented by Jessica Smith of the Pratt Institute in Brooklyn, New York, is a compostable and carbon negative biocomposite that can replace traditional petroleum plastics.

The International winner will be announced on November 19. 📍

AeroLyze focuses on the experience of the user. It uses a rating scale interface instead of a digital reading to reduce anxiety and misinterpretation about fluctuating blood glucose levels.



“The current process for measuring blood sugar levels is a long, painful ritual for just a mere glimpse at a three-digit number. I believe humans are built from experiences, not just numbers.” —THIPOK (POOM) CHOLSAIPANT

And Newsworthy Means...What?

TO LAUNCH PR FOR YOUR INVENTION, YOU MUST UNDERSTAND THE WORD AND HOW TO MAKE IT WORK **BY ALYSON DUTCH**

USING PR as a marketing method for product launch requires an understanding of what is newsworthy and what is not.

Whether an accomplished PhD or an enterprising young person starting out with a fantastic product, most people don't understand this.

Once I explain it, you'll be able to pick up the phone to a reporter at the *Wall Street Journal* or *Buzzfeed* and have an actual conversation instead of being blown off. There's nothing worse than calling a reporter and regaling him or her with a description of your product's features and benefits, followed by "It's so newsworthy!"

Did the reporter hang up on you?

Yeeeeeah (cringe).

Editorial versus advertising

A little background: You should understand what editorial is versus advertising—the latter known as "buys."

Editorial content is (ideally) not subject to being bought—manifested in the form of unbiased reporting, or the earned opinion of a reporter or producer. This is the content between commercials on TV, articles on dot-coms that are interrupted by popups, the organic listings on Google under the ads on the top, magazine feature stories between ads, etc.

Advertising includes anything you pay for—such as pay per click; influencers; banner, radio, TV and newspaper ads; endorsements, and many other methods. These are biased, subjective, paid-for placements.

Like my Labrador, I am food-driven and see it this way: Editorial is the cream in the middle of the Oreo.

PR is worth its weight in gold because it's inexpensive to solicit, and unbiased. Advertising can be worth its weight in gold but usually costs as much as gold, too.

It's about using all the trends, statistics and things already in the news to make your invention or product significant.



Long term is better

What if you could get your product reported about in 34 media outlets, during a 6-month period, and be exposed to 109 million potential customers by paying a PR agency a \$6,000 monthly retainer? Wouldn't that be better than purchasing one ad for one month in Vogue magazine at the cost of \$270,000?

What about spending \$36,000 versus \$500 a day (\$90,000) on GoogleAds? How about spending \$36,000 instead of a pricey \$5.6 million Super Bowl TV spot (which doesn't even include the cost of producing something cool)?

By the way, the first sentence of that last paragraph is a real case study from my company's work for a luxury skincare line that resulted in an 8100 percent return on investment. Had the skincare line bought advertising, it would have cost \$2.9 million to get the exposure it received through PR.

The secret of marketing is to target your customers and spread out your message so they see, hear and experience it repeatedly. I call this the "Oh, Yeah, I've Heard of That" response (September 2020 *Inventors Digest*), whereby humans only buy things they have heard of. Yes, we are sheep.

Leverage what's in the news

So, what is news?

Anything that is new and/or of legitimate interest.

This doesn't mean your jogging bra made of fabric that measures your heart rate is new. What I just listed is a feature and benefit—the information you put on a package.

What may be newsworthy about the bra is that it's now possible to weave wearable technology into a fabric for the first time, and your jogging bras are the first to use it. You might think about calling reporters during National Heart Month to make it moreso.

If you donated some of those bras to a women's hospital with patients who are recovering from heart attacks, that ups the newsworthiness. What if you could find a heart institute patient who used your bra and it saved her life when she had a relapse trying to jog too soon after her heart surgery? Now, that is newsworthy!

It's not about your bra. It's about using all the trends, statistics and things already in the news to make your bra significant.

The reason reporters hang up on you or don't respond to email pitches is because they don't want to yell at you. Enduring another product soliloquy makes them want to spit in your face like a llama.

I'll save you the embarrassment and tell you what they really want to say: "Buy advertising, dummy, don't waste my time telling me about your widget—because it's not newsworthy."

Try product roundups

That said, products have a special place in editorial. It's usually in product roundups, reviews or gift guides.

A product roundup is editorial that features all the newest accessories for your mobile phone, all red lipstick shades for Christmas or the best new electric vehicles.

A product review is a listing of all the newest laptops that have been tested at *PC Magazine*, *Consumer Reports*, CNET or the like. The Good Housekeeping Institute may do a story about the most waterproof mascaras or non-streaking window cleaners.

Gift guides happen all year long. They are organized by a product genre that appeals to the reader, listener and seer of that media outlet. Holiday gift guides are the biggest—created for Christmas, Hanukkah and Kwanzaa—followed by Valentine's Day, Mother's Day, Father's Day, etc., as well as wedding, graduation and baby gifts.

In summary: Anything that describes how your product works is a feature or benefit. Any trend, statistic, or something that's hot in the news that points back to the features and benefits of your products is newsworthy.

Got it? OK, go and conquer.

If you need any help, I've written two books that you can find at POMPrinciple.com or PRHandbookEntrepreneurs.com. 📖

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.





Good News for Patent Owners?

4 TECH BEHEMOTHS FILE LAWSUIT AGAINST USPTO FOR RULE THAT HURTS ALLEGED PATENT RIGHTS INFRINGERS

BY LOUIS CARBONNEAU

FOUR LARGE U.S. West Coast tech companies—Google, Apple, Cisco and Intel—recently filed a lawsuit against the United States Patent and Trademark Office. Because it is fairly rare to see corporate constituents take their own government to court (hiring lobbyists is so much more effective and discreet!), it is worth understanding why.

In their complaint filed at the U.S. District Court for the Northern District of California, the tech firms took aim at the so-called *NHK-Fintiv* rule. (Editor's note: *NHK-Fintiv* is named after two inter partes review decisions by the Patent Trial and Appeal Board that the agency previously designated as precedential.)

The policy allows the USPTO to deny an inter partes review petition based on discretionary factors relating to pending parallel litigation.

The companies allege that USPTO Director Andrei Iancu has exceeded the office's authority in promulgating such a rule.

'Death squad' dying?

Companies threatened by current or future patent litigation have had a field day since 2013 challenging the validity of patents at the PTAB through the filing of inter partes reviews. On those occasions, they have emerged victorious about 75 percent of the time and for a fraction of the cost of defending a lawsuit.

This significantly decreased the value of patents by 1) creating a doubt as to their overall validity, and 2) introducing a relatively inexpensive (\$300,000-\$500,000 instead of \$3 million-\$5 million) legal process to adjudicate on a case. This took away most of the incentive

for the accused party to discuss taking a license in good faith in order to avoid a lengthy and expensive trial.

After an outcry in the inventors' community, better messaging to Congress and a USPTO director (Iancu) who has shown to be more sympathetic to patent rights owners, the PTAB is no longer the automatic "death squad" it used to be. Changes in guidelines have slightly curbed the invalidation rate of years past, although patent owners still believe much more is needed.

In parallel, some district court judges who used to give deference to an existing PTAB proceeding and would stay their own case until the PTAB had issued its decision are no longer taking that approach. They now proceed at a "rocket docket" speed, issuing their own decisions faster than the PTAB can. Since these two jurisdictions are often at odds on the same issue, the first one to render a decision dictates in large part what follows.

Last March, the patent office issued a new rule that became final recently, whereby the PTAB will no longer institute a case (Step 1 in a two-step review process) if there is already a parallel pending case in court. So whereas patent owners have long complained that the PTAB deprived them from their day in court, alleged infringers are now in a similar situation where their forum of choice for invalidating a patent is no longer available to them if a district court is already involved.

Besides the fact that this will create further incentives to sue as a first way of communicating one's demand, it is also poised to remove one of the most effective defense strategies that



Alleged infringers are now in a situation where their forum of choice for invalidating a patent—the Patent Trial and Appeal Board—is no longer available to them if a district court is already involved.

defendants had at their disposal for the past several years—and which they leveraged with great success. As such, we predict that this will support the current movement we see toward higher patent valuations.

Looking post-Iancu

Most observers predict that Iancu will likely transition out of the patent office after the elections—as is customary for federal agency leaders—regardless of who wins the presidency on November 3. So, one could see this as an attempt to draw a line in the sand, make sure the status quo is preserved and keep the issue high on the next commissioner’s agenda.

Big tech will undoubtedly have an agenda focused on ensuring Iancu’s successor is less of an “activist.” Meanwhile, though, Silicon Valley has been forced to show its colors more directly after having been quite successful for the last decade at getting its way through a more traditional approach of lobbying and campaign contributions.

It didn’t take long for these tech behemoths to suffer backlash in the court of public opinion.

On September 14, a number of “Small Business Inventors” (identified by IP Watchdog as US Inventor; 360 Heros, Inc.; Larry Golden; World Source Enterprises, LLC; Dareltech LLC; Tinnus Enterprises, LLC; Clearplay, Inc.; and E-Watch, Inc.) filed a Notice of Motion and Motion to Intervene and related complaint in the California case.

That group argued that the disposition of the case will “have lasting impacts on their proprietary and legal interests” that are “distinct from the interests of the Original Plaintiffs, and of the Defendant.” The Small Business Inventors want to increase the ability of the USPTO director to deny institution—in part by promoting rules preserving and enhancing *NHK-Fintiv* discretion. 🗞

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.



The PLOT Thickens

PROTOTYPING'S 5 MAIN STAGES MIRROR FREYTAG'S PYRAMID FOR MOVIES AND BOOKS **BY JEREMY LOSAW**

THE PROTOTYPING PROCESS is like a good book or movie. It may start slowly and innocently, meandering along before ramping up in complexity with conflict and plot twists before all is harmoniously revealed in the end (or not).

Books, movies and prototypes are essentially different versions of the same thing—an exploration of an idea. Like a director or novelist, the prototyper must control how the story unfolds and use the right tools at the right time to achieve the desired result.

Just as Freytag's Pyramid defines a typical story arc—a gradually peaking and then descending model that includes the sequential stages of exposition, rising action, climax, falling action and resolution—prototyping phases typically follow a sensible pattern with well-known techniques and processes.

Unless you are taking an avant garde approach, here are those five main stages adapted for the prototyping story.

simple and made from inexpensive materials, they often reveal the most important aspects of the product and are when the most patentable ideas are revealed.

The key to creating concept models is speed. At this stage of the development process, it is important to keep ideas and concepts flowing, so the prototyping techniques need to support that.

You should not spend inordinate amounts of time building complex CAD models, and 3D printing is often too slow and cumbersome for this activity. You should keep the models low budget and easy to make so that you can iterate quickly; they should be made with fast prototyping tools and techniques while using simple materials.

Concept models do not have to look like a finished product ready for a store shelf. The goal is to test the core product's functionality.

These models often have a Frankenstein quality. Inexpensive materials such as cardboard, sheet plastic and PVC are all great material choices; harvested components from existing products can help provide sources for more complex components that are hard to make easily.

Concept models can often be made from simple tools you have around the house—drills, saws and Dremel tools—but more advanced tools such as laser cutters can be of great benefit here because they can quickly cut custom, two-dimensional shapes from inexpensive materials.

For electronics, Arduinos and similar development boards are your friend. They are easy to program, and there is a plethora of examples available to reference. In the end, a concept model can be too big and too ugly, but it has to work well enough to prove the innovation is viable.

This concept modeling prototype is of a device that tests the range of motion of a horse's leg to see if its tendons are in good shape. It was made with all stock materials, flat ABS and aluminum, and steel tubing.



Exposition: Concept modeling

Prototyping starts innocently with an idea and the desire to figure out whether it will work. These first stages of prototyping are often called concept modeling, as the product or aspects of the product are being explored to see if they are conceptually on point.

Early prototypes start to reveal the characteristics of the product. Although they may be



This alpha prototype of a stroller accessory uses 3D-printed and custom-machined parts that were built from CAD files of the fully designed product. It was used for extensive testing but was not painted or finished to look like a final product.

Both a typical story arc and prototyping include the sequential stages of exposition, rising action, climax, falling action and resolution.

Rising action: Alpha prototype

The alpha prototype is where the product looks real for the first time.

The design of the alpha prototype marries the technical DNA from concept modeling with the aesthetics developed by the industrial design team. For this round, the prototype is fully designed using CAD (computer-aided design) software before any parts are made.

There are often great challenges in persuading the technology to fit within aesthetic housings, so CAD is necessary to work out those details before spending time and money building the prototype.

For products that have electronics, this is the first time the custom-designed circuit boards are developed for the product. Developer kits are usually too big and too expensive to design into the final product, so circuits are designed with functionality and cost of goods in mind.

No more duct tape and hot glue for this prototyping stage. Most of the plastic parts are made on 3D printers because they are fast and inexpensive for small quantities, but they can also be machined if the plastic must have specific properties.

Metal parts are machined, and elastomeric parts can be molded in low volumes relatively inexpensively. Printed circuit boards are made by a board prototyping service; the parts are ordered and populated in the prototyping lab. Then the components are assembled by hand by shop technicians and engineers to assess the fit and finish.

Because this is the first time the product has been built in the scale and shape of the proposed final product, the alpha is a workhorse. It takes on hours of testing and may be subject to swapping out different components and modifications to learn as much about the design as possible.

Climax: Beta prototype

The stakes are high for the beta prototype. This is typically the last prototype before

This beta prototype of the Kanno spice grinder is a highly aesthetic looks-like/works-like prototype that was used for demonstrations and digital assets.



This production product of Caiman Hat Clips—inspired by the fierce predator that dominates Amazon rivers and is closely related to the alligator—was made in-house at Enventys Partners in Charlotte.

It is important to set up a robust quality control procedure to ensure that the products are meeting the standards and tolerances so carefully refined during the factory sampling phase.

transferring the design to manufacturing.

All of the lessons learned from the alpha are incorporated into the CAD design, and the model is tuned to be prepared for manufacturing. The molded parts are drafted (given angled faces) so they can be removed from the molds, and sourced components are added wherever possible. The design is optimized for low cost of goods—including removing or combining parts to reduce the overall number of parts—and the circuits are optimized for manufacturing.

Beta prototypes are works of art that are often used for marketing purposes as well as technical evaluation. The prototyping processes are typically similar for the alpha and beta, but more time is spent making the prototype look like a finished product.

Parts are sanded and painted in the color scheme of the product; decals are added where logos may be pad printed on a final product. The result is a beautiful prototype that looks and works like the final product.

These prototypes are what are often used for photography and video support for crowdfunding campaigns or other marketing efforts. Multiple beta prototypes are usually made to provide samples for the factory that will make the product in volume.

Falling action: Factory samples

Once the design is completed it may feel like prototyping is over, but there are multiple iterations during the manufacturing process.

At the start of manufacturing, tooling (molds) is cut from steel or aluminum and the plastic injection-molded parts are made for

the first time. Circuit boards are manufactured and populated by pick-and-place machines, and machine soldered to ensure accurate placement of electronic components. Then the product is assembled on a prototype production line setup to verify the assembly process.

The first unit built from the production setup is called the T1 sample (T stands for “tooled”). It is a prototype of the manufactured good. The T1 samples have a reputation for being pretty rough; the factory is just learning how to build this new product. The tooling is not usually polished or textured, so the parts can look unfinished.

However, after each tooled sample, the issues are documented and sent back to the manufacturer. After a few iterations, the product gets better and better until it is good enough to be released as the specification for the manufacturing run.

Resolution: Production product

Once the product is being produced in mass quantities, the prototyping journey is complete. However, this does not mean the product is perfect or that there is not work to be done.

It is important to set up a robust quality control procedure to ensure that the products are meeting the standards and tolerances so carefully refined during the factory sampling phase. If there are critical components, they cannot change in the middle of the run and risk having defective product in the marketplace.

Also, each product that is sold and finds a home with an end user is an opportunity to gain feedback on the device. It is important to listen to customer feedback and reviews to understand how the product is being used (or not used) so that future iterations can be updated or improved. You may find that customer feedback sparks an idea for your next product. 🍷



Downward Slide

REPORT SHOWS U.S. PATENT SYSTEM VEERS AWAY FROM PROTECTIONS FOR INNOVATORS **BY GENE QUINN**

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

THERE IS a symbiotic relationship between innovation and patents. The innovation that we say we most want is cutting-edge innovation that requires time, money and determination to bring into being.

This paradigm shifting innovation or technology that can be characterized as disruptive creates leaps forward and solves society's greatest problems. Witness the race for vaccines and treatments to address the COVID-19 pandemic gripping the world.

Innovative leaps forward lead to the formation of startup companies and, frequently, to the birth of entire new industries. It is with this type of most desirable innovation that we see enormous job growth, and the greatest benefit to society.

A major shift

Unfortunately, paradigm shifting innovation is not cheap. And patents are the lifeblood of this type of disruptive innovation.

The Alliance of U.S. Startups and Inventors for Jobs (USIJ) recently released a report detailing a

comprehensive study that confirms the importance of patents. It discusses the consequences of a patent system in the United States that has veered away from strong protections for innovators and toward rules and laws that make it easier for implementers to copy the innovations of creators without remuneration.

The report finds that slanting the U.S. patent system against venture capital (VC)-backed startups in R&D-intensive industries has resulted in a major shift of venture capital. Interviews with leading inventors and investors conducted by the USIJ show that changes to the patent system are causing VC investment to flow away from key life sciences investments.

"We are less likely to address issues such as cardiovascular disease and chronic diseases such as diabetes and kidney conditions," explained one VC. "These high-impact types of diseases are not being addressed like they would have been previously."

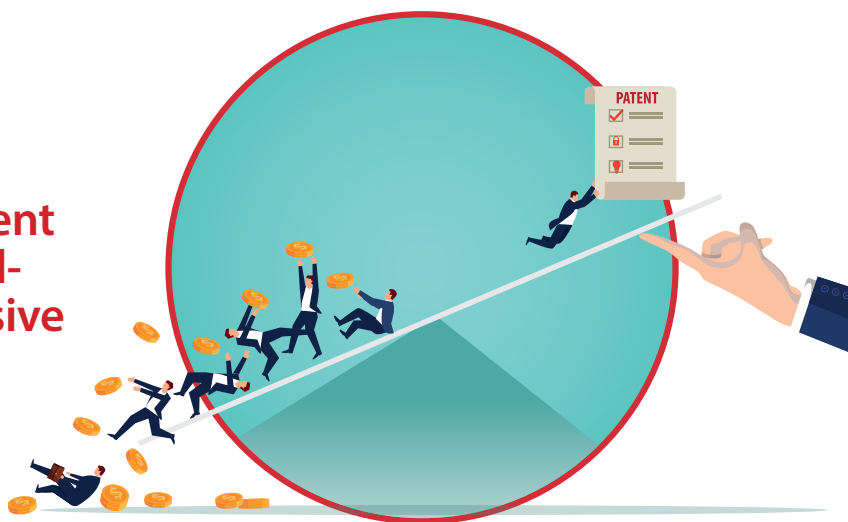
This shift also has come at the expense of semiconductors, core wireless, medical technologies and other capital-intensive industries to social media, consumer finance and hospitality—as well as other sectors where reliance on R&D is nonexistent or insignificant.

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The Alliance of U.S. Startups and Inventors for Jobs study revealed that slanting the patent system against venture capital-backed startups in R&D-intensive industries resulted in a major shift of venture capital.



Unfriendly terrain

Why? Undoubtedly, because of the uncertainty of U.S. patent law as it pertains to patent eligibility.

Since the U.S. Supreme Court decided the quartet of cases in *Bilski*, *Mayo*, *Myriad*, and *Alice*, the interpretation and implementation of the law as applied to medical diagnostics, biotechnology and software has been oppressive. Even innovators in the areas of artificial intelligence and machine learning innovations have found difficult, if not impossible, terrain. And it is impossible to patent medical diagnostics in the United States, period.

The draconian shift away from the world's most permissive and welcoming patent system has been stark.

It has had a disproportionate impact on startups, universities and smaller entities focusing on research and development. It has affected these entities most because larger entities are risk averse and the very act of innovating requires asking new questions with an open mind and attempting to improve or disrupt existing markets.

Smaller entities take risk, which is why when patent law and policy cuts against the risk takers the consequences for the future of innovation are severe. And those responsible for funding startups and R&D-intensive companies have noticed.

According to the USIJ report, 74 percent of those surveyed said patent eligibility is an important consideration in firm decisions whether to invest in a company, and 62 percent said that their firms were less likely to invest in a

company developing technology if patent eligibility makes patents unavailable.

Money in flight

Obtaining funding is already difficult enough, and startups that are most likely to engage in the type of paradigm shifting research that will lead to real disruption in wide swaths of the U.S. technology sector are immediately behind the eight ball. This is because a significant majority of VCs that would otherwise be interested in investing are not, because of U.S. patent eligibility laws.

Other findings in the USIJ report confirm this bias, and flight of money away from innovation and into safer investments not based on research and development:

- The share of money invested in patent-intensive startups that develop key technologies such as medical devices pharmaceuticals and biotechnology has declined, dropping from more than 50 percent in 2004 to about 28 percent in 2017.
- Less patent-intensive sectors such as social networking, consumer finance, food and beverage, and restaurants, hotels and leisure have attracted a significantly larger share of venture capital in recent years.
- There has been a precipitous decline in the relative share of funding going to companies developing products in the pharmaceutical and biotech sectors. Overall, the sector experienced a 20 percent decline in share of funding.

- VC investment in pharmaceuticals went from a 7 percent share of all investments in 2004 to a 0.79 percent share in 2017.
- In 2008, the share of all VC funding going to medical devices was nearly 12 percent of all VC funding. By 2015, the share halved, dropping to less than 6 percent—where it remains. The share of funding for businesses developing patent-intensive, high-tech hardware, such as computer hardware and semiconductors, has dropped significantly. 📉

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.



PERLMUTTER NAMED COPYRIGHTS REGISTER



Shira Perlmutter, the United States Patent and Trademark Office's chief policy officer and director for international affairs, has been chosen by Librarian of Congress Carla Hayden to be the 14th U.S. Register of Copyrights.

Before her position at the USPTO, which she held for eight years, Perlmutter was executive vice president for global legal policy at the International Federation of Phonographic Industry. She contributed to domestic and international IP policy development; represented the United States in negotiations at the World Intellectual Property Organization; oversaw the USPTO's economic research, international education and IP attaché programs; and managed the USPTO's work with the United States trade representative on matters involving IP and trade, according to a USPTO press release.

Previously, she was vice president and associate general counsel for IP policy at Time Warner, Inc.

Maria Strong had been acting register since January after former Register Karyn Temple left the position last December. Temple had been promoted to register in March 2019 after 2 ½ years as acting register. Maria Pallante, the 12th register of copyrights, had been fired from the position in 2016.

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Best wishes, Jack Lander

TRADE SHOWS NOVEMBER 2020

Editor's note: All major shows originally scheduled for this month, including those that were postponed until November, have been canceled for 2020 due to the COVID-19 pandemic.

IoT Corner

As connected devices grip the marketplace, they are by no means guaranteed to be safe from hackers. This was proven with a jarring demonstration on a Smarter brand coffee maker.

Martin Hron, a researcher with the security firm Avast, was able to take total control of the device—causing it to spew hot water, run the grinder, beep uncontrollably and demand a ransom via the device's display. It only took him a week to uncover glaring insecurities that allowed him to tap into the device's WiFi and send unencrypted firmware updates.

The humorous but alarming YouTube demonstration garnered more than 100,000 views less than a week after its posting, a stark reminder that it is a buyer-beware marketplace when it comes to IoT security. —*Jeremy Losaw*



Wunderkinds

Layla Amir was 11 in 2015 when she came up with Shady Lamp, which operates like vertical blinds to vary the light output. She met with Carl Gregg at Fab Lab Sunderland in the United Kingdom, who made the prototype. He said it took about 80 hours to design and build. "I love how this project mixed old technologies such as push rods, gears and louvers with contemporary techniques such as laser cutting and 3D printing," he said at inventorproject.co.uk. Shady Lamp has not come to market.



© SHADY LAMP

What IS that?

With Thanksgiving just around the corner, it's the perfect time to show off your **Sniffy's turkey hat**. Add your COVID mask for maximum entertainment and personal discomfort. We couldn't determine whether someone actually patented this. Ignorance is bliss.

742 The number of non-exhaustive Amazon trademarks listed at amazon.com at this writing—including Bag O' Crap; Danger & Eggs; and Get Online, Not in Line. The list may be non-exhaustive, but it sure was tiring to count them all.

WHAT DO YOU KNOW?

1 Who has the highest net worth among these international celebrities in Forbes' 2020 list of America's Richest Self-Made Women?

- A) Beyonce B) Taylor Swift
C) Anastasia Soare D) Lady Gaga

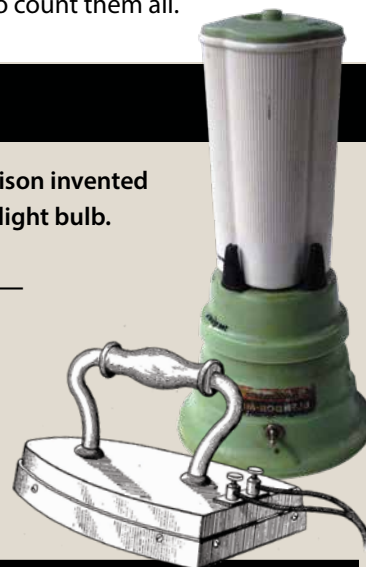
2 Nikola Tesla believed it could be possible to photograph:

- A) Thoughts B) Air
C) Souls D) Ghosts

3 **True or false:** Thomas Edison invented a commercially superior light bulb.

4 Which was invented first—the iron or the blender?

5 **True or false:** Anything mailed or emailed to you becomes your property for copyright purposes.



ANSWERS: 1. C. The Romanian-born makeup mogul and "Queen of Eyebrows," with 23 patents at Justia.com, has an estimated net worth of \$540 million. 2. A. "I became convinced that a definite image formed in thought must, by reflex action, produce a corresponding image on the retina, which might possibly be read by suitable apparatus." 3. True. Don't overthink the questions! 4. Iron 1882; blender 1922. 5. False. You can't publish it without the author's permission, even though you can report what it says or quote from it.

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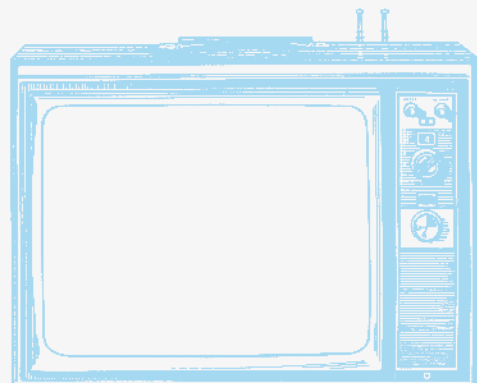
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