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Inventors DIGEST

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As Youth is Served, So Are We All

Poet/humanitarian/civic leader Samuel Ullman said, "Youth is not a time of life. It is a state of mind."

Chronologically, 41-year-old *Inventors Digest* has reached that respected, venerable time of thinning hair and crow's feet—but we don't see any compelling reason to act our age.

Fifty years ago, Hank Aaron was 42 when he hit the last of his 755 major-league home runs, a record that may never legitimately be broken. Tom Brady was closer to 44 than 43 when he won his last Super Bowl. Nolan Ryan was 44 when he pitched his last no-hitter. Martina Navratilova won her last Grand Slam tennis title (U.S. Open mixed doubles) a month shy of her 50th birthday.

As with these celebrated sports icons, *ID* thrives with a youthful energy and vigor—in our case, largely manifested through fresh, knowledgeable, sometimes passionate voices and an ongoing celebration of positive, innovative change. Because each new generation renews and builds on that mission, we're expanding our celebration of young inventors in this month's issue.

Wunderkinds, previously a short item celebrating youth accomplishment on our Inventiveness page, now gets a full page of its own. We'll revisit historic youth accomplishments, celebrate victories in competitions, and report new opportunities through contests and grants.

Children and teenagers are not a big part of *Inventors Digest*'s core demographic (which is well-educated Baby Boomers, Generation Xers and Millennials). But they're a substantial, growing factor in today's innovation, and in this high-tech universe are certain to be major players in the near future.

Our main audience, and our commitment to more diversity of content and voices, remain unchanged. We like who we are. There's nothing more beautiful than experience—and laugh lines.

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CORRESPONDENCE

A Guitar Pick Dream, and Willie Nelson

Editor's note: Inventor Michelle Morrison (July 2025 cover story), founder of Creative Inventive Solutions, chose to share this special story with Inventors Digest.

I've held onto this story since 2014.

Years ago, my big brother came to me with an idea—an innovative guitar pick. He asked if I would help him bring it to life.

He was an incredibly talented guitarist and could make a guitar sing, but computers and anything online weren't his thing. That's where I stepped in.

And then everything changed.

My brother was diagnosed with Stage 4 cancer and given six months to live. I told him we should put everything on hold. He said no.

So I made him a promise: If he focused on taking care of himself, I would keep going. And I did.

Music was a big part of who my brother was, with a deep appreciation for artists like Stevie Ray Vaughan, Joe Walsh—and Willie Nelson.

I reached out to anyone who might listen. People were kind. Encouraging. Musicians reached out with their support, but no major doors opened.

I followed every possible path that might lead somewhere. At one point, that path led me to Willie Nelson.

One evening, my phone rang. Hawaii. I almost didn't answer.

"Hi, Michelle, this is Willie Nelson. I hear your brother's not doing well."

There was no mistaking his voice. I remember that moment like it was yesterday—the chills come back every time I think about it, even as I'm writing this.

He was kind, genuine, and wanted to do something special for my brother. I explained he wasn't well enough to travel and asked if he would call him. He said yes without hesitation.

I wanted to make sure my brother answered an unknown number, so I called to let him know he was going to receive a call from a very special musician.

While we were on the phone, he said, "I'm getting a call." We hung up.

I waited anxiously.

He finally called me back and said he missed the call, called the number back, and then his phone rang again. It was Willie.

As he shared the details, I could hear his voice crack as he held back the tears. He said, "I can't believe I got a call from Willie Nelson."

I asked him to call me back and repeat the details on my voicemail so I could keep it forever. He did.

A day or two later, he realized he had an unexpected gift. When he first missed the call, Willie had taken the time to leave a message.

"Hey, Rick, this is Willie Nelson. I hope you're doing better. Come see me sometime."

He listened to that message over and over. I still have both messages—Willie's and my brother's.

My brother only had a few weeks to carry that joy with him. But what Willie gave him and our family is something we're still so grateful for.

I've protected this story for years, out of respect for Willie and the kindness he showed in a deeply personal time. But I've come to realize that honoring someone for who they are is also a form of respect.

Willie, if this ever finds you, thank you again. You brought light and happiness beyond measure to our family.

And I hope anyone who only knows you as a legendary musician sees, through our story, the kindhearted and compassionate person you are.

Willie Nelson called to lift the spirits of a musician-inventor with Stage 4 cancer.

INVENTING 101

How Press Releases Can Protect Your Invention

BY DON DEBELAK

Press releases are a valuable tool that inventors should use more often than they do. They can help prevent others from patenting your idea (and can generate leads for licensing or sales, a topic I covered earlier).

Inventors have one year to file for a patent once they publicly disclose their idea—which could be a webpage, an effort to sell the product, attendance at a trade show or a press release. But their danger is simply waiting.

Patent rules say the one-year disclosure works for the inventor, or people involved with the inventor. But if somewhat else has a public disclosure for a similar or same invention, the one-year period stops.

On the other hand, when you publish a press release, it is prior art immediately for someone else wanting to patent your idea. This stops anyone else from getting a patent on your idea unless they apply for a patent before your press release.

Of course, you might not be able to get a patent, either, as the other party might qualify as the first to file if you don't file a provisional patent application. But at least you will be able to pursue your idea without infringing.

What about a provisional patent application for preventing someone else from patenting your idea?

The problem with that approach is, no one at the patent office looks at PPAs. An examiner won't know that you applied for one on the same idea as an application he or she is considering. The examiner may not see a press release from you.

But having the press release gives you opportunities to file a Third-Party Notice of Prior Art with the patent office to prevent the second party from receiving or enforcing a patent. If someone files for a similar or the same patent and the one-year period expires on your PPA before you file an application, you won't necessarily be able stop someone else from patenting your idea unless you have published a press release.

I don't recommend relying totally on the press release because of the patent office's first-to-file rules, which say the first person to file is the one who can receive a patent. But the safest strategy is to file utility patents when your product is developed. That way, you have a possibility of full patent protection if the patent office approves your patent.

The second-safest strategy is filing a provisional patent application, then a utility patent within the one-year period prior to the PPA's priority date protection expiring. But as a

VITAL VOCABULARY

trade dress This form of trademark protection refers to the visual appearance of a product or its packaging that gives it a unique, unmistakable look and feel. *ID* contributor Cynthia Underwood provided a classic example in last month's issue with her piece on the Coca-Cola contour bottle.

Patent: What Are Your Chances?

The process of applying for a patent for the first time can be exciting, daunting, or both. You might be surprised that generally speaking, your chances of approval are greater than you think.

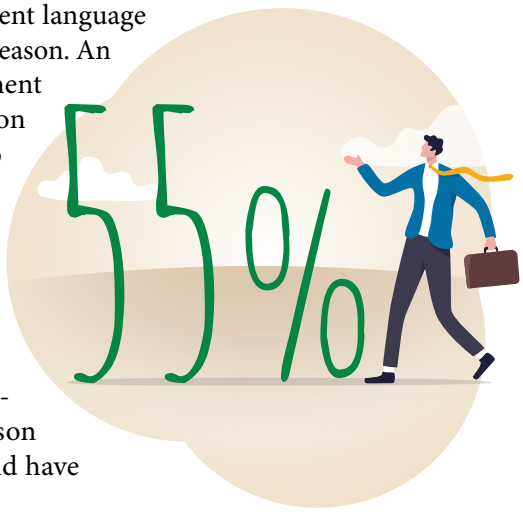
According to the U.S. Patent and Trademark Office, the overall patent allowance rate has averaged 55 percent to 60 percent in recent years. Of course, whether your application is approved depends on variables including which patent examiner you get. But the most important factor is your preparation.

Inventors Digest readers have long been schooled on essential basics that include thorough prior art searches; the probability that hiring a patent attorney will provide important knowledge, guidance, protections and increase your chances of approval; avoiding broad, unspecific claims; and staying current with patent rulings.

San Francisco-area patent attorney Amir Adibi, writing about the patent rejection rate, lists the top three reasons applicants can end up in that losing 40 percent to 45 percent category:

Lack of novelty. This is where that prior art search is mandatory. If your invention is already known or used by others, your application could be (and probably will be) rejected. You can make additions or amendments to the prior art in question, but if that does not produce a new (novel) and unexpected result, the result could well be the same.

Non-obviousness. This clunky-sounding term is common in patent language and court rulings for a reason. An invention or improvement on an existing invention cannot be obvious to person skilled in that field at the time of filing. In other words, the onus is on the applicant to prove to the patent examiner that the idea isn't something an ordinary person skilled in the field could have easily conceived.



Inadequate disclosure. How does your invention work? What problem does it solve? What are the parts, and how are they used? These are just some of the questions that must be addressed to the examiner's satisfaction, without hype or promises. It's all about the details—but without overdoing it by disclosing trade secrets or other confidential information.

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precaution, in case you can't file the utility patent before the one-year provisional patent priority date protection is up, file a press release.

Where the press release is published doesn't matter; any newspaper, magazine or even internet site that sells products will do. Trade magazines or consumer magazines directed to your target audience are best.

You can produce your own press release using resources such as pressrelease.com or canva.com/docs/press-releases.

Don Debelak is the founder of One Stop Invention Shop, offering marketing and patenting assistance to inventors. He is also the author of several marketing books.

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Pinball, Before its Tilt

Game's long post-Prohibition popularity came despite gambling overtones, ties to organized crime **BY REID CREAGER**

Identifying the inventor of the pinball machine is somewhat like playing the game: The answer pings and caroms all over the board, depending on which version in the game's long evolution is discussed.

One certain aspect of the game's history is its less than wholesome background.

Pinball has its origins with the French game Bagatelle, which was played on a tabletop with marbles. It's widely believed to have been introduced in America by French soldiers fighting in the War of Independence.

Wizards of pinball innovation included Cincinnati inventor Montague Redgrove, who in 1871 was awarded U.S. Patent No. 115,357: a model of a Bagatelle game that features a spring-based ball shooter, which remains integral to today's pinball machines. The first coin-operated machine came 18 years later.

Gottlieb's Baffle Ball and Bally's Ballyhoo became popular in the 1930s, a decade in which the electric pinball machine and automatic scoring machines were introduced. Harry Williams' introduction of the tilt mechanism in 1935—a simple mechanical sensor later refined as an electrical pendulum tilt—became standard in all machines.

Gottlieb's invention of the flipper in 1947 changed the game forever, adding an element of quick reaction and timing for players. It also gave the game a long-needed boost of legitimacy.

'Slimy crews of tinhorns'

The curiously named whatitmeanstobeanamerican.org provides some background:

"With Prohibition winding down [in the early 1930s], organized crime was eager to take on pinball as a more acceptable alternative to the highly illegal slot machines of the day. It was a cash business, and it was a good one. For almost 30 straight years, pinball made more money than the entire motion picture industry."

The invention of the flipper in 1947 changed the game forever, adding an element of quick reaction and timing for players.

Below, left to right: Gottlieb's Grand Slam machine was released in 1972; its Baffle Ball was one of its first entries in the 1930s. Harry Williams' introduction of the tilt mechanism in 1935 helped legitimize pinball.

The games involved shots that may or may not land on random targets for prizes. By the middle of the 20th century, the vast majority of machines were manufactured in Chicago—known as an organized crime mecca under crime boss Al Capone.

Though the machines were legal, many viewed them as gambling devices. New York Mayor Fiorello La Guardia described manufacturers as "slimy crews of tinhorns, well dressed and living in luxury on penny thievery." Police routinely raided pinball halls, seized machines and destroyed them.

But the introduction of flippers, combined with the earlier tilt mechanism, helped pinball become more a game of skill than chance. Bans in U.S. cities eventually softened, although pinball was not legalized in New York, Chicago and Los Angeles until the 1970s. Oakland, California, still had a ban on pinball machines as recently as 2014.

Revival? How strong?

Many Americans Of A Certain Age recall spending a lot of time in pinball halls at college pubs in the 1970s, when a new blitz of sophisticated machines was launched with various pop culture themes. But the craze wound down in the 1980s with the introduction of video games and has not seen a major revival.

The game's last pop culture 20th-century hurrahs—reminiscent in The Who's 1969 hit "Pinball Wizard" and Paul Newman's boozed-out lawyer character playing the game in "The Verdict" in 1982—may be its last. Or not.

Despite the significant decline of pinball arcades through the past several decades, *Medium* wrote three years ago: "The pinball market is surprisingly fresh and loaded with products that people want to play, both licensed and otherwise."

And *Business Insider* reported last October: "Now, in the era of arcade bars and basements, the classic game has earned an extra life. New technology, digital integration, and motivated collectors are fueling a pinball renaissance."

No irrefutable statistical data were provided in either case, suggesting the game's staying power may rest in the hands of a loyal faction of diehards hoping not to tilt.

INVENTOR ARCHIVES: MAY

June 9, 1900: Fred Waring, American inventor of the Waring Blender, was born.

A musician and bandleader, Waring sought to create a machine that could simplify and speed the process of mixing dr inks with efficiency. His work partner, Fred Osius, was responsible for the blender's engineering and design.

The blender became an important tool in hospitals for implementing specific diets, as well as a key scientific research device.

INVENTOR UPDATE

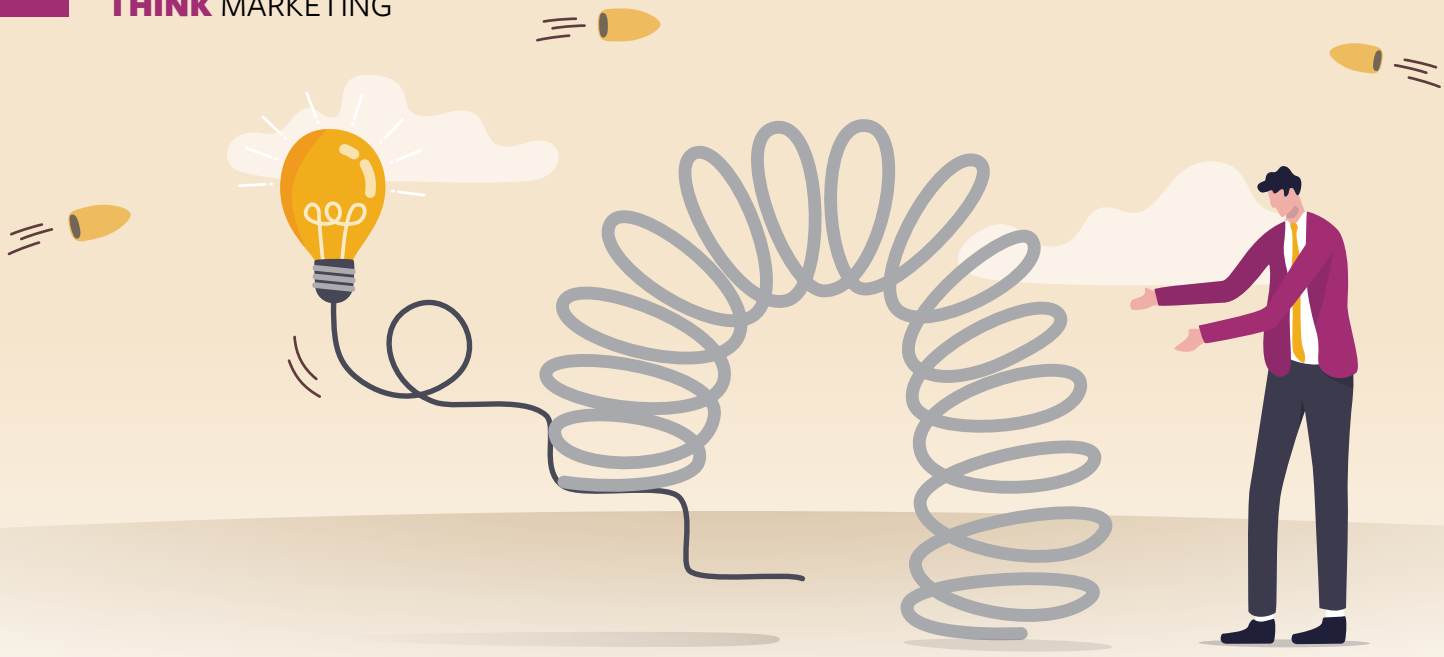
Inventor and actress Lily Winnail, a two-time cover subject for *Inventors Digest*, realized the dream of a lifetime recently when she became an American citizen.

"Ever since I was a little girl, I dreamed of living in the United States," she wrote. "It was written in my baby book long before I could understand what that dream truly meant. I believe God had it written in the stars for me before I was even born."

Born in Canada and living in America since she was 18, she became a U.S. citizen alongside 71 others in Charlotte.

"I cannot fully express the gratitude, pride, and humility I felt in that moment. As I stood there, I became overwhelmed thinking of the millions who came before me, many fleeing hardship, searching for safety, freedom, and hope. I realized how incredibly blessed I am that my journey here was not from desperation, but from opportunity, love, and destiny. ...

"What an honor. What a privilege. Let freedom ring."



Classic Toys and ...War?

Failed experiments became commercial successes when reimagined for a different use **BY WILLIAM SEIDEL**

Before World War II, boys' toys were guns and soldiers, usually metal or wood. But the most successful toys coming from WWII technology were not guns and soldiers.

War demands nations to think fast, spend big and push the limits of human ingenuity. However, not every breakthrough solves the problem it was intended to solve. Some of the most enduring toys came from failed and discarded experiments.

Slinky, Silly Putty, Walkie Talkies and video games do not come to mind when you think of military technology. But these were byproducts of serious work, dismissed as irrelevant to military needs. Their value emerged only when someone saw what others did not.

Recognizing the unexpected may find new life as commercial gold.

The accidental toy

In the early 1940s, naval engineer Richard James was working on springs that would stabilize sensitive shipboard instruments. He accidentally knocked one of the prototypes off his lab bench and watched it gracefully walk from a stack of books to a table and to the floor.

It wasn't useful for the Navy, but it was mesmerizing.

Richard's wife, Betty, recognizing the magic, suggested it would make a great toy. She named it Slinky because of its slithery movement.

In 1945, they launched the product near Philadelphia. It became an instant hit, selling millions and spawning decades of variations.

There is a smack of irony that a failed military component became one of the most successful toys in history. Few toy products have endured more than 80 years and over 350 million units sold. (For more on Slinky, see Page 13.)

When failure finds a market

"Silly" isn't serious business to a wartime military contractor. But $400 million of Silly Putty is serious business.

When rubber supplies ran short during WWII, the United States urgently needed synthetic rubber. Chemists Earl Warrick of Dow Chemical and James Wright at General

Electric both experimented with mixing boric acid and silicone oil.

The result was a gooey material that bounced, stretched, broke and flowed like a liquid. It even copied pictures from comics. It was fascinating but useless for military tires.

The scientific importance of a synthetic rubber for military use far outweighs the value of Silly Putty, but it was a curiosity for years.

Advertising consultant Peter Hodgson saw it at a cocktail party and watched a room full of people passing it around and laughing. That convinced him, because an important part of marketing anything is getting people to talk about it.

Hodgson recognized what the chemists missed. It was fun!

In 1947, he borrowed $147, secured rights from General Electric and packaged it in plastic eggs for Easter. Sales were slow until it was mentioned in an article in The New Yorker, which sparked the sale of 250,000 eggs of Silly Putty. It became a national phenomenon within months.

Within a generation, Silly Putty became a cultural icon, went to the moon aboard Apollo 8, was displayed in the Smithsonian, and inducted into the National Toy Hall of Fame.

The breakthrough wasn't technical but the reframing of a failed material as a playful experience.

Recognition can be gold

Advances in plastics enabled mass production across industries widening distribution, yielding better products and greater profits. The toy industry grew more than tenfold from 1940 to the early 1950s.

Walkie-talkies were developed for battlefield communication in the 1930s-40s. After 1945, the technology moved from military restricted to open-market consumer goods and became a childhood staple of the 1950s.

The common thread is recognition. The intense focus on what something is supposed to be rather than what it could be often requires the view of an outsider.

In many cases, the next big product isn't invented from scratch. It's already sitting on a shelf, waiting for someone to see it differently.

A military development mission focuses on the objective. If the development doesn't meet the mission's objective, it is dismissed as a failed experiment.

Reverse evolution

Today, the flow of innovation is no longer one-directional—but from military development to consumer acceptance and improvements, back again to military use.

Military technologies such as computers for missile trajectories, air force flight simulators and radio control weapons have become successful consumer products. Once developed for defense, they have scaled in consumer markets, where competition drives down cost and accelerates improvements.

These improvements are re-purposed for military use. This cycle of declassified military technologies, commercially proven and improved in the private sector, then reintroduced to the military, is not uncommon.

Remote-controlled torpedoes were developed by Nikola Tesla in 1898. Germany used wire-controlled explosive boats during World War I, while WWII saw the widespread use of radio-controlled bombs.

Post-war, remote-control technologies were declassified, miniaturized and cost-reduced for hobbyist remote-controlled cars, boats, aircraft and drones.

Consumer markets greatly accelerated the growth with smart aerial cameras, lightweight materials, battery improvements, GPS and AI. Today, low-cost drones can be built from commercially available components.

Australian-made cardboard drones are low-cost, disposable, flat-packed aircraft supplied to Ukraine for reconnaissance and strike missions. Made from waxed cardboard and rubber bands, they are radar resistant, easy to assemble and have a 75-mile range.

Twenty years ago, "video game geek" was not considered employment experience. Today it is considered a training ground for recruiting for positions in the military, cybersecurity, IT, high-tech manufacturing and even air traffic control.

Video game skills, such as high-pressure performance developed in video games, are now valued by recruiters. The video game industry is $189 billion. Only the United States and China have larger military budgets.

Last word

Innovation often comes from unexpected accidents—as was the case with stainless steel, duct tape, Teflon and superglue.

In many cases, the next big product isn't invented from scratch. It's already sitting on a shelf, waiting for someone to see it differently. The advantage goes to those who can reframe it.

What falls off the lab bench may be discarded—or a golden opportunity. When the unexpected happens, the innovator knows what to do with it!

William Seidel is an entrepreneur, author, educator, innovator and court-approved expert witness on marketing innovation. In his career and as owner of America Invents, he has developed, licensed and marketed billions of dollars of products.

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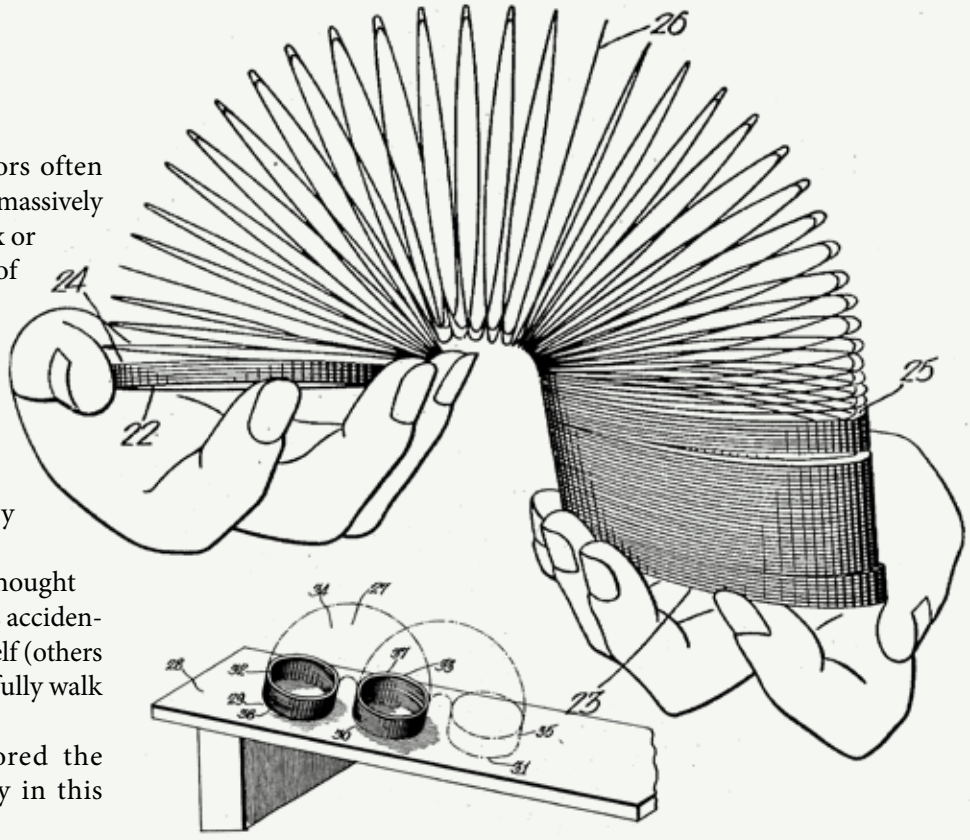
The Slinky:
The Power of Believing in a Simple Idea

BY CYNTHIA UNDERWOOD



In today's startup culture, inventors often believe they must create something massively disruptive, technologically complex or world changing to succeed. Yet one of the most iconic patented inventions in American history is a simple coiled strip of steel that can walk on its own in a silly and mesmerizing fashion.

That invention is the Slinky—U.S. Patent No. 2,415,012, granted January 28, 1947.

It is said that the Slinky was first thought of when naval engineer Richard James accidentally knocked a tension spring off a shelf (others say a lab bench) and watched it gracefully walk across the floor.

Many people would have ignored the moment, but James saw possibility in this quirky moving piece of metal.

The Slinky did not solve a global crisis or require artificial intelligence. It succeeded, and continues to succeed, because it creates delight. People are fascinated by it. Kids love it.

Innovation often begins with the courage to take simple ideas seriously and imagine possibilities. Inventors often dismiss their own ideas because they seem too simple, yet history repeatedly proves that simple inventions can become cultural icons: the paper clip, Velcro, the Post-it Note and others.

Fortunately, James protected his invention with a patent. A patent gives inventors ownership, credibility, and a foundation for building a business.

The Slinky patent itself did not guarantee success, but it did give it legitimacy and helped turn a curious observation into a worldwide phenomenon. It also protected James from having his invention pirated with no recourse.

For startups and inventors, the message is timeless and very important. Believe in your ideas, protect your intellectual property, and take the leap even before certainty exists.

Cynthia R. Underwood is a design patent examiner, painter and innovation advocate. She is co-creator of the "How Cool Is That?" video series, which highlights inventive objects and their stories. Her creative work is at cynthiaunderwood.com.

Your Long Game's **Multiple Impacts**

How consistency on social media supports licensing deals, partnerships and investments **BY ELIZABETH BREEDLOVE**

There is a quiet moment that happens long before a licensing agreement is signed or a partnership takes shape. It happens much earlier, often privately, when someone who matters types your name into a search bar and begins to scroll.

This person isn't looking for your product, per se; this person is looking for you.

He or she wants to understand how you think and communicate, if you show up consistently, and whether you appear to be someone who is trustworthy over time.

For inventors who did not grow up with social media as an important professional tool, this part of the process may feel unimportant. But it plays a meaningful role in shaping real business outcomes.

Consistency's quiet role

Social media works best when it runs quietly alongside the entire product development journey.

When people encounter you or your product more than once, in slightly different contexts, it creates a sense of recognition. Perhaps they first see a short video explaining your concept. Then, they come across a post where you are talking about a small manufacturing challenge. Later, they stumble upon a photo of your product in progress.

None of these moments alone feel significant. But together, they begin to form a picture.

This is particularly important for licensing deals and partnerships, where decision-makers are not only evaluating the idea itself but the person behind it. They are asking themselves whether you will be responsive, whether you understand your market, and whether you are someone they would want to work with over time.

For inventors who are used to working quietly and independently, the idea of sharing progress publicly can feel uncomfortable. There is often a concern about revealing too much or appearing unpolished. But trust rarely comes from perfection, and consistency and visibility over time matter much more.

When you post updates about your project regularly, even if the posts are simple or basic, you create a record of your thinking and your development process. You show how you approach problems, how you handle setbacks, how you communicate ideas. This kind of transparency makes it easier for others to imagine working with you.

Remember that it's about offering a window into your process, not about sharing every detail or giving away intellectual property.

Consider posting a short explanation of why you chose one design over another, a reflection on feedback you received, or a quick update on where things stand. These small snapshots of your work, when shared consistently, begin to add up.

When someone checks your profile and sees that you have been posting regularly for

When someone checks your profile and sees that you have been posting regularly for months or even years, it signals commitment and suggests you are not treating your invention as a passing interest.

months or even years, it signals commitment and suggests you are not treating your invention as a passing interest. It shows that you are invested enough to keep showing up, even when there is no immediate reward.

Consistency also creates multiple opportunities for people to engage with you online. Not everyone will see every post—but if you continue to show up on social media, chances increase that the right person will encounter your work at the right time.

Engagement with storytelling

For companies considering a licensing deal, one of their key questions is whether there is interest in your idea.

Traditional market research can answer part of that question, but social media provides a different kind of signal. When people engage with your posts, ask questions, or share your content, it indicates that your idea is connecting with an audience. Even modest engagement can be meaningful if it's consistent and relevant.

This doesn't mean you need thousands of followers. Oftentimes a smaller, engaged audience is more valuable than a large, passive one. What matters is that your content leads to genuine interest and an ongoing conversation.

For potential partners or investors, this serves as a form of validation. It shows that your idea exists outside of your own perspective and that others are paying attention.

One of the advantages inventors have on social media is that their work naturally lends itself to storytelling.

Sharing that narrative over time allows others to feel invested in your progress. They begin to understand not just what you are building but why you are building it. They see the challenges you encounter and the decisions you make along the way.

This kind of narrative creates continuity. So when a person or people eventually reach out to discuss a partnership or investment, they aren't starting from zero. They already have context. They already have a sense of who you are and what you care about.

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Create a rhythm

For inventors who are unsure where to begin, it helps to think of social media as an extension of the work you are already doing. You don't need to become a content creator in the traditional sense; you just need to document parts of your process in a way that is clear and consistent.

This could look like sharing a weekly update, posting a short explanation of a design decision, or reflecting on a lesson learned. The format matters less than the consistency and the clarity of your message.

It is also important to choose a platform that feels manageable. Whether that is LinkedIn, Facebook, Instagram or another channel, the goal is to create a sustainable rhythm with your posts. A single platform used well is more effective than spreading yourself too thin between multiple social platforms.

The results of social media activity are rarely immediate. There may be long stretches when it feels like little is happening. But behind the scenes, something is building—thanks to your consistent efforts over time.

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.

Outdoor Adventure: It's in the Cards

San Diego explorer's informative, beautifully designed decks help families discover the best of U.S. cities **BY EDITH G. TOLCHIN**

According to inventor Deanna Megan Ratnikova of San Diego, "I set out to give my family a fun way to spend time together, and the GO Deck was born."

Ratnikova's line of exploration games provide both this and exercise at the same time. Is that even possible?

Edith G. Tolchin (EGT): How did you come up with your invention?

Deanna Megan Ratnikova (DMR): I grew up in east Tennessee, now live in San Diego, and work full time in biotech. When the pandemic hit in 2020, I started to explore San Diego by foot, focusing on the natural attractions within the city. Even though I had lived here for eight years at that point, there were so many gems I'd never truly appreciated or even noticed.

Each time I discovered something new on my urban outings, I'd share it with friends and colleagues. Before long, people started coming to me asking for recommendations and I started to consider how I could easily share with others my favorite outdoor spots in the city.

Around this same time, my significant other gifted me with an informational card deck to enhance our relationship. The cards—visual, non-sequential, with just enough text to give me the gist—were the perfect medium to match my short attention span, coupled with my daughter's frequent calls for "Mommy!"

In the few minutes I had to delve into the deck without an interruption, I was inspired to try something new, and this is when my idea for The GO Deck city series started to take shape. I toted my daughter along to sites while researching and writing city decks.

On one fateful hike, she exclaimed, "I'm done!" and yet we were over a mile from our car. I distracted her with a word game, and we played the game as we walked back to the car. To my surprise, she asked me to keep playing on the drive home instead of begging for the tablet as soon as we returned to our vehicle.

Leading up to this experience, I had been feeling guilty about the amount of screen time I was giving my daughter, so to see how a simple game could help us balance screen time (and also help us connect) sparked my desire to identify more games we could play anytime, anywhere—no materials needed. This is how "Games to Play on the GO" was born.

Deanna Megan Ratnikova's idea began when her significant other gifted her with an informational card deck to enhance their relationship. She toted her daughter along to sites while researching and writing city decks.

EGT: Do you and your family travel a lot?
DMR: My family lives on the East Coast, and my husband's family lives in Seattle. We try to see them once a year, though sometimes it's more like once every two years. Beyond traveling to see family, my daughter and I rarely leave San Diego. (My spouse, however, is active-duty military, so he travels frequently.)

Though I don't take many long road trips or airplane rides, I'm constantly exploring San Diego County (which is larger than the entire state of Delaware), and these local excursions make me feel like a traveler.

EGT: Tell us about copyrighting and trademarking your products.
DMR: When I was prototyping the first city deck, I started to think about what I would call the product. I enlisted the help of an IP attorney to research names and provide advice on what would likely be accepted by the USPTO.

I've since used this attorney to trademark additional products and even a mascot, and she also helps me file copyright applications. I recognize the privilege I have to be able to utilize an attorney for my IP needs, but it's one aspect where I do not feel confident taking it on myself—nor is it how I want to spend time within the business.

I don't think a business owner can do it all, so figuring out early on what you want to outsource (legal, accounting, marketing, and so on) can help you maintain enthusiasm and energy during the sometimes difficult entrepreneurial journey—because you're then able to focus more on tasks that you do enjoy.

EGT: Have you had any obstacles during product development?
DMR: There have been hiccups along the way, but the biggest obstacle is the voice in my own head. If I can control the dialogue in my head, issues like printing errors, missed deadlines with contractors, shipping snafus and the like seem minor.

When my mindset is right, I focus on what I can control, how to fix something as quickly and efficiently as possible, and then move on. There are days, however, when I let fear, doubt, anxiety and other negative emotions take over. Running a business is one of the hardest things I've voluntarily taken on, with becoming a parent definitely *the* hardest ... but both are very rewarding.

Each GO Deck card has trail details, dog friendliness and nearby extra options for added exploration.

EGT: Where are you manufacturing?
DMR: I manufacture in China. I explored printing my products in the USA, but the costs were four times the quote from China. I investigated U.S.-based partners again when the tariff war escalated, and even then, it's still less expensive to print in China.

Utilizing a foreign partner allows me to sell my product at a price the majority of the U.S. population can afford, and I want my products to be accessible for all.

EGT: Do you plan to add to your product line, such as new location games for exploration?
DMR: With all my products, I hope to make getting out and about easier and more inviting

PHOTOS COURTESY OF GO DECK

Games to Play on the Go is designed to enhance learning while reducing screen time.

to the average person. Customer feedback on the city decks is that they'd like a simple way to quickly input the address or coordinates of a location once they've selected where to go.

To answer that need, I'm working on a free digital tool that would enable users to tap a location on The GO Deck map and use their smartphones to navigate to the site.

I've also heard from customers that they sometimes want a "done-for-you" plan when visiting a particular location, so I've been testing family-friendly scavenger hunts that help people discover the top attractions at a site.

It's taken me a while to come around to the idea of a digital product, because I don't want to create anything that increases our time on tech devices. I appreciate, however, that technology can make getting out and about easier, so I'm being mindful as I develop these digital products to ensure it's something I can be proud of adding to my business offerings.

I want to stay true to my mission of helping people connect with the natural world, each other, and with their communities.

EGT: If any of your products are intended for children under 12, please share your experience with third-party lab testing (for children's products) to comply with the many government regulations.

DMR: "Games to Play on the GO" is targeted to parents and caregivers of elementary school-age children. I created it to help me connect with my daughter while we were on the go, and sans screen. So, I consider these products more as tools for adults to more easily connect with children versus children's toys—plus, most kids are unlikely able to play the games without the support of an adult.

I hope these products help other parents and caregivers connect with their children and discover that quality time together is still possible in this digital age.

EGT: Any advice for inventors seeking to develop similar games?

DMR: Now that I'm in the thick of running a business, developing the product seems like the easy part! I had no idea how many different hats I'd have to wear once the product was finished. I also didn't realize the expenses would just keep adding up even after the product arrived: web design, public relations, marketing, accounting, shipping/receiving, and more.

It's a rollercoaster ride, full of ups and downs.

One way I've overcome the negative dialogue in my head is to consider how I would feel if I didn't pursue this effort. I believe that the regret of not going for it is far worse than trying and failing, and that helps me keep moving.

So, my advice to others is to focus on your mindset and find a way to remind yourself why you started this journey in the first place.

Details: thegodeck.com

Edith G. Tolchin has written for *Inventors Digest* since 2000 (edietolchin.com/portfolio). She is the author of several books, including "Secrets of Successful Women Inventors" (https://a.co/d/fAGIvZJ) and "Secrets of Successful Inventing" (https://a.co/d/8dafJd6).

1-2-3 Common Invention Questions Answered

BY BEN GREENBERG, FOUNDER OF INVENTIONS UNLIMITED
InventionUnlimited.com • Ben@InventionUnlimited.com

1 What should inventors focus on once they get their first sales?

Systems, not just sales. Your first orders prove demand. Your next challenge is fulfillment, quality control and cash flow. Many inventors fail at this stage by growing too fast without reliable manufacturing or logistics. Growth only works when repeatable processes support it. Otherwise, success becomes chaos.

2 Why do so many good products fail after launch?

Because execution breaks under pressure, early buyers forgive minor flaws—but the market won't. If quality slips, shipping delays grow, or customer service falls apart, momentum dies. Launching is exciting, but sustaining requires discipline. Products rarely fail from a lack of innovation alone; they fail because operations weren't strong enough to support growth.

3 What mindset should inventors adopt once they're "in the market"?

They need to transition from inventor to business owner. Once customers are paying, your job is no longer just improving the product, it's protecting trust. That means consistency, communication and reliability. The inventors who win in the long term treat their brand like a promise, not just a product.

10 QUESTIONS WITH

JOE MANICO

Abundant Impacts

Acclaimed inventor explains how AI's powerful capabilities dramatically enhance workflows—but can't replace the human element

When Joe Manico speaks about inventing and innovation, people listen.

During his career that began with the Eastman Kodak Co. in 1975, Manico began collaborating with other inventors and filing patents on new inventions in the realms of digital image processing, film and digital cameras, innovative digital displays, printers and print finishing systems. He has contributed to 251 granted U.S. patents, with assignees that have included Eastman Kodak, Kodak Alaris, Apple and Carestream Health.

Manico was identified as one of the primary contributors to the Kodak Patent Portfolio, which was sold for $525 million. He later joined Kodak Alaris as a research scientist, where he helps protect corporate research investments with intellectual property. He has been using IP.com solutions for 13 years, making him one of the company's earliest customers, and utilizes IP.com's workflow-based AI technology for better results, greater efficiency and reduced risk.

He says that fundamentally, inventing has not changed: It is still predicated on solving a problem that needs a better solution. "The inventor of the plow wasn't happy using a manual digging stick and the idleness of his donkey," he said.

We're listening.

What feels most different about inventing today?

The biggest difference is the speed at which an inventor can move from a rough thought to an informed conversation.

Earlier in my career, the first stretch of invention work was slow, fragmented, isolated. You would rely on memory, a few trusted experts, manual searches and whatever documents you could find.

Today, AI can very quickly surface terminology, adjacent approaches, prior art patterns and technical context that might have taken days or weeks to assemble.

That does not make the idea good by itself, but it changes the starting line. Inventors can begin with a broader view of the landscape, and that forces better questions much earlier.

For example, tools like IP.com's Semantic Gist® search capabilities enable an engineer to see relevance-ranked prior art from plain language descriptions early in the development process. No need for complex Boolean

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The owner of 251 patents with more than 50 years' experience in inventing and intellectual property, Joe Manico touts artificial intelligence's ability to efficiently streamline early invention work. He is a longtime user of IP.com's solutions, including its proprietary Semantic Gist® engine. AI "can help search, organize, compare, summarize, stress-test and draft. But it does not own the problem," he says.

"The spark still comes from a human recognizing a problem, caring about the outcome, and making a judgment about what might work."

This AI-enhanced photo by IP.com shows the ways AI can help change and improve the workflow of inventing.

search strings or waiting weeks for external search results.

When you think back to earlier R&D environments, what did the invention process look like before AI?

In the pre-internet days, if you wanted to read a patent you needed a patent number and a legal assistant would order a printed copy from the USPTO—and you'd have it in a few weeks. A prior art search would be required prior to public disclosure, but that would be very late in the commercialization process, would usually be sent out to individuals without intimate knowledge of the invention, and would take significant time and resources to complete.

The process was much more sequential: Someone had an idea, talked to a few colleagues, sketched it out, maybe searched for some patents or papers, and then at some point the IP team entered the process. A lot depended on who happened to be in the room and what they personally remembered.

Search was manual or sent out to patent searchers, terminology was a real barrier, and visibility was often narrow. Good inventors still did excellent work, but the process had more blind spots. You could spend a lot of energy building confidence in an idea and only later discover that the space was crowded, the vocabulary was different, or a similar solution already existed in another field. The worst-case scenario is that you would learn about relevant prior art after filing from a patent examiner.

Has AI changed the act of inventing itself, or has it changed the workflow around inventing?

Invention is a human mindset. I see AI changing the workflow around inventing more than it changes the core act of inventing. The spark still comes from a human recognizing a problem,

caring about the outcome, and making a judgment about what might work.

AI is very powerful around that spark. It can help search, organize, compare, summarize, stress-test and draft. But it does not own the problem. It does not carry the responsibility for the decision.

So, the workflow is being transformed, but the inventor's curiosity, technical judgment and accountability remain central. AI can enhance efficiency by automating workflows, but a human needs to make the decisions and choose the options.

What has not changed about invention, even with all of today's AI tools?

Invention still starts with curiosity and dissatisfaction with the way something works today. It still requires persistence, because most ideas are incomplete at the beginning. It still requires technical judgment, because not every plausible answer is a workable answer.

And it still requires documentation. You have to capture what was conceived, what problem it solves, how it works, and why it is different. AI can help with many of those tasks, but it cannot replace the discipline behind them.

AI, in my view, is an eager, world-class, collaborative research assistant. At the end of the day, a human still needs to make the judgement about things like the utility of an invention as usefulness is still a human standard—not a machine or artificial intelligence standard.

What does an AI-assisted invention workflow look like from the moment someone has an idea?

I would start by capturing the idea in plain language: the problem, the proposed solution, the context, why it matters. Not only does this provide important documentation, it allows you to communicate the invention to a broader audience.

I've had an advantage using IP.com's AI-powered platform as an early adopter years ago and became accustomed to describing my ideas in plain language, removing the manual convert concept to Boolean step. Now I can use AI to expand the vocabulary around the idea, identify related technologies, suggest alternate embodiments and use Gist to surface curated prior art or analogous solutions.

From there, the inventor should compare the concept against what is already known, refine the point of novelty and document the most important variations. The best workflow is not "ask AI for an invention"; It is "use AI to interrogate, improve and document a human insight."

What can AI reveal early that inventors often used to discover too late?

A plain-language Semantic Gist® search can reveal relevance-ranked prior art, and AI can reveal crowded technical areas, different terminology, adjacent solutions and competing approaches very early.

It can also show that the value may not be where the inventor first thought it was. Sometimes the original idea is not new, but a particular implementation, workflow, data structure, or use case is more interesting. That kind of early signal is valuable. It helps inventors avoid wasting time, and it helps them pivot toward the part of the idea that may actually be differentiated.

How does early AI-assisted searching change the decision to keep going, pivot or stop?

When you don't know the prior art, everything seems patentable. A thorough prior art search makes the decision more evidence based.

Inventors are naturally optimistic, which is a strength, but optimism needs discipline. Early AI-assisted searching gives you a faster read on whether the space is open, crowded, or simply described using different language.

If the results look promising, you keep going with more confidence. If the space is crowded, you pivot toward a narrower or more technically distinct contribution.

If the idea is clearly already known, stopping early is not failure. It is good innovation management and saves on expensive legal and filing fees.

What is the biggest mistake inventors make when using AI during ideation?

The biggest mistake is confusing plausible with true. A general-purpose AI can sound confident even when it is incomplete or wrong. That is dangerous during invention, because a polished explanation can make an idea feel more mature than it really is.

Inventors should use AI to generate hypotheses, not conclusions. Validate the output. Check the sources. Search the patents and literature. Talk to technical people.

The human inventor has to remain skeptical, especially when the answer sounds too easy.

Where is AI genuinely helpful in the invention process—and where should humans remain firmly in control?

AI is genuinely helpful in search, summarization, comparison, classification, terminology expansion, drafting support and organizing invention disclosures. It can help an inventor see the landscape and express the idea more clearly.

Humans should remain firmly in control of inventorship, technical conclusions, filing decisions, legal strategy and final review. Those are judgment zones.

AI can assist the workflow, but it should not be the decision-maker for what was invented, who invented it, whether to file, or what legal position to take. Those decisions should be made by humans.

Looking ahead five years, what will separate successful inventors from those who struggle to adapt?

Five years? It's hard to imagine because with the radical improvements I've seen over the last six months, five years now seems far in the future.

Successful inventors will learn how to combine imagination with evidence. They will use AI early, but they will not outsource their judgment to it. They will search broadly, document carefully, validate aggressively, and stay curious.

The inventors who struggle will either ignore AI entirely or trust it too much. The advantage will belong to people who can ask better questions, evaluate answers critically, and keep the human act of invention at the center of an AI-assisted workflow.

"Inventors should use AI to generate hypotheses, not conclusions. Validate the output. Check the sources. Search the patents and literature. Talk to technical people."

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BRIGHT IDEAS

RingConn Gen3

SMART RING FOR TRACKING HEALTH

ringconn.com

This is a smart ring designed to track your health 24/7 without a screen or wristband. It quietly tracks sleep, heart rate, recovery, stress and now even blood pressure-related data in the background.

Iteration 3 adds vibration alerts and advanced vascular tracking previously only found in much larger devices, along with improved sensors and longer battery life.

The vibration alerts involve a miniature haptic motor that provides tactile feedback, giving gentle vibrations for sedentary reminders to get you moving, low battery warnings and high-stress or health alerts. Vascular load tracking uses specialized algorithms and sensors to track the trends of your blood pressure and circulatory stress.

The ring retails for $349.

DOJO Air

PORTABLE, DATA-DRIVEN BREATH TRAINER

dojoair.com

Improve your breathing and track your results using guided training exercises, precise volumetric measurement, and real time data. Potential benefits include stronger lungs, improved performance, faster recovery, deeper sleep, emotional regulation and sharper focus.

Your devices track your VO2 Max (the maximum amount of oxygen your body can consume and use during intense exercise), heart rate variability, resting heart rate and sleep scores.

Measure your inhale, exhale and breath-holding capacity with precision. Instantly see your lung capacity. The kit comes with a free app, desktop nest and travel case.

With a projected retail price of $349, DOJO Air is to be shipped to crowdfunding backers in December.

Shiftwave Pro

SYNCHRONIZED REGULATION SYSTEM

shiftwave.co

Tested in real-world, high-performance settings, this restful wellness system coordinates four signals into one experience: full-body vibration via a clear, rhythmic, tactile signal that anchors the body and draws your attention into the session; guided audio with narration, breathwork, meditation and coaching woven into immersive protocols to guide pacing and focus; supported positioning through a zero-gravity position that reduces postural effort and physical load; and a blackout mask that removes visual distraction, directing focus inward.

The structured sessions are guided in real time. Start a session and the system runs the flow, cue by cue, from start to finish.

Shiftwave Pro, which is easy to move between rooms or locations, retails for $9,950.

"Imagination is the beginning of creation; you imagine, then you create." —GEORGE BERNARD SHAW

SenseRobot Chess Mini

AI ROBOTIC CHESS MENTOR

senserobotchess.com

SenseRobot—digital chess with real-world play—is "your dedicated chess partner and coach" featuring 19 skill levels, 1,200 training exercises, 100 classic games and 145 endgame puzzles.

No phone, personal computer or tablet is required. Games on Lichess and chess.com are mirrored in real time via ChessConnect on a physical board with weighted pieces.

You can relive and export your games via the app for review. Use Apex Duel (Elo 3200) for a world-class challenge that tests your calculation and sharpens decision making under pressure.

SenseRobot is to ship to crowdfunding backers in July. It will retail for $699.

Launch Timing Tips

Depending on your product category, certain times of the year are preferable—but with strong competition **BY APRIL MITCHELL**

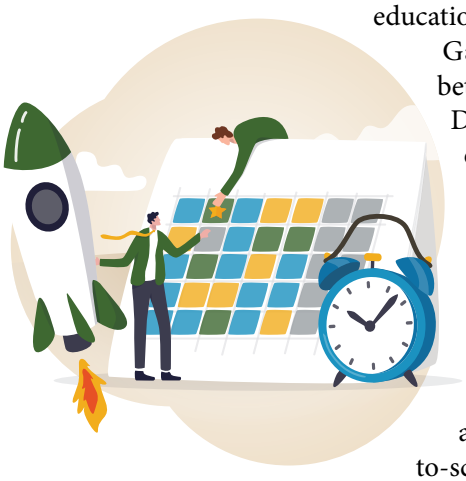
Among the most important considerations when launching a new product is timing. We need to think about when customers will want our product, when retailers will want it, and when we can actually deliver it.

The challenge is maximizing visibility at a time when our competition is lowest but demand is still strong. This varies for each industry.

Timing factors to consider:

Seasons

Certain products sell better when launched at specific times of the year—especially holiday-driven products, outdoor/travel/beach, and educational/family products.



Games, toys and giftables do better when launched in October-December, because these kinds of products are more likely to be bought for the winter holidays. Most companies involved with these products realize a large percentage of their year's sales in that last quarter of the year.

The outdoor category naturally often launches in spring and early summer, with back-to-school and educational products often timed for August and September.

This timing is almost entirely customer driven, meeting their wants and needs.

Too much noise?

Certain times of the year are loud with all the new products on the market. The frequently heavy spending in the fourth quarter means competition can be fierce, so you may need to spend more money on advertising to stand out.

On the contrary, the first two months of the year usually have less competition (possible exception: exercise equipment because of all those making New Year's resolutions).

If you are a smaller brand, it may be worth considering launching during a quieter window of the year.

Soft-launch strategy

A soft launch during a quieter time of the year can build product awareness, get product reviews, and gain excitement and momentum. Then you can follow with your holiday push with marketing and sales. This allows you to have customers' testimonies established, with recommendations to family and friends about your product.

During this soft launch period, you can attend events showcasing your new product to help create some buzz. Also, try to get social media to cover your new product, as well as get it in front of influencers with whom it would be a good fit.

Media and influencers tend to get flooded with requests during the holidays, so start early with your marketing and requests. As it gets closer to the holidays, build up some fun marketing. Offer an exciting sale that will get curious consumers buying your product.

Even the day matters

Consider which day of the week is important to launch and/or run marketing. Studies and launch analytics show Tuesday through Thursday mornings typically are best, and better gain people's attention, because they are not connected with weekend distractions.

Most important, though, is the right timing for customers, retailers and you.

April Mitchell of 4A's Creations, LLC is an inventor in the toys, games, party and housewares industries. She is a two-time patented inventor, product licensing expert and coach who in 2024 won the TAGIE Award for Game Inventor of the Year.

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Copyrights on YouTube: Enforcement and Reality

Digital Millennium Copyright Act's safe harbor provisions highlight an environment of uneasy compromise **BY ANDREA L. ARNDT**

During the past two decades, YouTube has operated at the uneasy intersection of copyright law and mass participation.

The platform's scale, with hundreds of hours of video uploaded every minute, has made it both a showcase for creative expression and a persistent test case for how well existing intellectual property law functions in a digital environment.

YouTube highlights a core tension: Despite a robust legal framework, a significant amount of content remains available that arguably should not be posted at all.

The persistence of questionable content does not reflect a single failure of law or platform governance. Instead, it arises from the complex variables of U.S. copyright doctrine, statutory safe harbors, automated enforcement systems and the practical limits of scale.

Copyrights vs. the DMCA

Under U.S. law, copyright owners possess exclusive rights to reproduce, distribute, publicly perform, display and prepare derivative works.

Uploading copyrighted material to YouTube without authorization can implicate several of these rights simultaneously. On its face, much content posted to the platform appears to violate these statutory protections.

However, YouTube's legal position is shaped by the Digital Millennium Copyright Act (DMCA)—particularly its safe harbor provisions under Title 17 of the United States Code (which governs copyright law), Section 512.

These provisions shield online service providers from monetary liability for user-generated content, so long as certain conditions are met. Among them are the requirements that the platform lacks actual knowledge of infringement, does not receive a direct financial benefit from infringing activity it controls, and expeditiously removes infringing material upon notification.

From the platform's perspective, the DMCA represents a legislative compromise.

Congress recognized that requiring pre-screening of every upload would be technologically and economically prohibitive, potentially inhibiting innovation and speech. YouTube argues that it complies with both the letter and intent of the DMCA by responding to takedown notices and offering tools for rights holders.

Why infringing persists

Despite this framework, infringing material remains widely accessible. From a rights holder's perspective, several issues contribute to this outcome.

First, enforcement under the DMCA is largely reactive.

Copyright owners must identify infringing content and submit takedown notices that comply with statutory formalities. For companies with large catalogs or individual creators with limited resources, this can be an onerous process. Even after takedown, content may be reuploaded by other users, requiring repeated enforcement.

Second, the distinction between infringement and fair use is often unclear, even to sophisticated parties. Fair use analysis involves a fact-specific, multi-factor inquiry that considers purpose, nature, amount used and market effect.

Many videos incorporate copyrighted material in ways that fall into gray areas—such as commentary, criticism, parody or educational use. Platforms are generally reluctant to adjudicate fair use themselves, preferring to defer disputes to rights holders and users.

Third, automated systems such as Content ID, while powerful, are imperfect. Content ID relies on reference files provided by rights holders and algorithmic matching. It can miss infringing uses that are modified, fragmented or combined with other materials.

Conversely, it may flag content that is lawful, including licensed uses or fair use, leading to disputes and appeals.

Platform, user perspectives

From YouTube's vantage point, the continued presence of disputed content is not evidence of disregard for copyright law but a result of compliance with it. The platform invests heavily in enforcement infrastructure, including Content ID, dispute resolution systems and transparency reporting.

The distinction between infringement and fair use is often unclear, even to sophisticated parties.

YouTube also emphasizes that it goes beyond what the DMCA requires by proactively offering rights holders tools to monetize, track or block content at their discretion.

Users, particularly independent creators, raise additional concerns. Many rely on fair use to comment on, review or critique existing works.

Overly aggressive enforcement can suppress lawful speech and favor large rights holders with the resources to assert claims broadly. Some creators contend that fear of takedowns and account strikes discourages legitimate educational or transformative content, undermining the platform's diversity.

In this view, the presence of copyrighted material on YouTube is not inherently a failure but a byproduct of an open system designed to balance rights enforcement with expression.

Leveraging legal uncertainty

Copyright law was not designed with mass, instantaneous global distribution in mind. Courts continue to address how traditional doctrines apply in digital contexts. Decisions involving contributory and vicarious infringement, red flag knowledge and repeat infringer policies shape platform behavior but do not eliminate ambiguity.

This uncertainty also creates strategic incentives. Some rights holders tolerate or even tacitly encourage uploads that generate revenue or promotional value, intervening only selectively. Others prioritize enforcement against commercial competitors rather than individual users.

On the user side, some knowingly upload copyrighted content, assuming it will evade detection or remain online long enough to be

worthwhile—typically with insubstantial consequences for being caught.

For inventors, engineers, and IP-driven businesses, YouTube's copyright environment presents both risk and opportunity.

Educational and promotional videos may inadvertently incorporate protected materials, exposing uploaders to takedowns or claims. At the same time, proprietary materials such as training videos, technical demonstrations or product footage may be reposted without authorization.

Navigating this landscape requires a practical understanding of copyright scope, fair-use boundaries, licensing and enforcement tools.

For rights holders, proactive monitoring and strategic decision-making are often more effective than exhaustive takedown efforts. For creators, documenting licenses, relying on original works and understanding the consequences of infringement claims is increasingly important.

A system still in tension

The current environment is designed around compromise. Copyright law, fair use, platform liability rules and enforcement mechanisms attempt to balance protection, innovation and speech at unprecedented scale.

Whether that balance remains appropriate is an ongoing question. Legislative reform, judicial clarification or technological advances may eventually shift the equilibrium.

For now, YouTube exists in a state of managed imperfection where infringement, fair use, enforcement and expression coexist—often uncomfortably—and where both rights holders and users operate with legal awareness rather than certainty.

Andrea L. Arndt is a member of the Intellectual Property Practice Group at Dickinson Wright in Austin, Texas. She is a nationally recognized intellectual property attorney with extensive experience advising startups, Fortune 100 companies and market leaders on their intellectual property portfolios globally. Contact 737-484-5536 or AArndt@dickinsonwright.com.

FOND FAREWELLS

Scientist and medical technology entrepreneur **J. Craig Venter**, who published the first bacterial genome ever decoded in 1995, died April 29 following complications from being treated for cancer. He was 79.

Venter's achievement heralded a new era of discovery in genetics in which researchers raced to decode the genomes of other pathogens, and eventually animals.

The Human Genome Project was declared complete in 2003, with 92 percent of the human genome decoded. Most of the remaining genome was sequenced by 2021.

Venter had nearly 100 patents and applied for more than 350. More recently, in 2013, he co-founded Human Longevity, dedicated to finding new ways to fight diseases linked to aging, such as Alzheimer's disease.

Roger Adams, who invented the rolling sneakers known as Heelys, died March 24 of pancreatic cancer. He was 71.

In 1998, Adams was on vacation in Huntington Beach, California, and going through a divorce after 21 years of marriage. He was also unhappy as a case manager at the department of mental health in Marion County, Oregon. Watching roller skaters and skateboarders, he thought of his childhood as the son of roller-rink owners and conceived "a shoe that could roll on command by just shifting your body weight," he told NBC News in 2004.

"It was like a flash," he said. "The hair stood up on the back of my neck."

He cut out the heel of a sneaker and then ran "a rod through the heel," he told NBC News, borrowing "one of the wheeled bearings that come on skateboards."

Making Small Prototypes From Wood

Popular medium allows for easier shaping and intricate cuts **BY JACK LANDER**

Table saws are great for prototyping large objects such as chests, stools, sideboards and more. They are indispensable for square and accurate angular cuts in boards and plywood.

But if your prototype is small, an ordinary table saw is not the tool you want for the job.

Most of my prototypes would fit in a cigar box. I don't cut large boards or plywood, so my table saw is miniature—and perfect for cutting the raw sizes and kinds of wood I use. Its size is 5 1/2 by 7 1/2 by 3 3/4 inches.

I also have a mini drill press, mainly to limit my workspace and enable me to sit while working. A larger drill press is also usable but not a time saver like the mini.

Wood's advantages, options

The first step in making small prototypes is to select the medium from which most of them will be made. I have emphasized wood here because shaping it is generally not difficult, and many prototypes should imitate an eventual plastic molded shape.

Wood allows us to create intricate features such as undercuts, which would only be economical if the finished product is plastic injection molded.

You might start with a hunk of 2x4 or even 4x4 lumber and drill, chisel and carve the intended features. But that seems like too much work—and it is. The secret is to start with a piece of precision-machined wood and a tube of B-7000 glue.

Precision-machined wood is available in a wide variety of cross-sections, such as 1/8 inch by 1 inch, 1/2 inch by 1/4 inch, and so on. I have located nine similar combinations online, each at least 12 inches long.

A few sizes of bamboo and balsa wood are also available. I favor Amazon as the supplier because the many different kinds and sizes are all together in a couple of continuous pages, but there are several other sources.

I have found the 1 inch wide by 1/8 inch thick to satisfy most of my needs, because I can easily saw it into narrower pieces or glue it to make thicker pieces. The combinations are endless.

Gluing and clamping

For gluing, I use B-7000, which is a bit thicker than Elmer's glue but can be used on metal and plastic as well as wood.

If you are assembling two or more different materials, the thicker viscosity is helpful. And it is easy to control when clamping.

A small bench vise, chip-bag clips or even C-clamps are helpful while waiting for drying. I find C-clamps to be the most difficult to use.

Another useful tool is an X-Acto knife, which offers replacement blades, so you'll always have a sharp knife at hand.

And finally, you will find that a hand-held rotary tool and its assortment of metal tips will enable carving shapes that you can't create any other way.

That's enough to get started. No hammer needed. Have fun!

Jack Lander, a near legend in the inventing community, has been writing for *Inventors Digest* for nearly a quarter-century. His latest book is "Hire Yourself: The Startup Alternative." You can reach him at jack@Inventor-mentor.com.

Don't Ditch the Moat

Speed has increasing urgency for startups in the AI era, but established, structured protections still matter **BY LOUIS CARBONNEAU**

There is a provocative piece making the rounds lately from Mavka Ventures, a venture capital firm, titled "The Moat is Dead. Long Live the Runner."

The thesis is bracingly simple: In the age of AI, competitive entrepreneurial moats—the long-term, structural advantages and protections that Warren Buffett spent a career identifying and investing in—are obsolete. The future, we are told, belongs not to castle builders but to speedboat captains.

Velocity of execution is the new everything. The thickest walls no longer matter; only the fastest legs do.

It's a compelling narrative. It's also only about half right.

As someone who has spent over 30 years in the intellectual property market—buying, selling, licensing and valuing patents—I have watched more than a few "the old rules are dead" manifestos come and go. Some had merit. Most ended up being the business equivalent of declaring gravity optional because you just invented a really fast elevator.

So let's take a fair, balanced look at this one. Because while the speed argument has real force, the case for the moat remains far more durable than its critics suggest.

And in the IP world, the answer turns out to be refreshingly simple. You need both.

Speed thrills, and it works

The Mavka piece correctly identifies a tectonic shift in the tech landscape: The cost and time required to build software products has collapsed. AI wrappers built on commoditized foundation models are shutting down at accelerating rates because anyone with an API key and a long weekend can replicate them.

In 2025, AI startups captured nearly two-thirds of all U.S. venture capital, and that flood of money didn't create defensibility. It destroyed it.

When your six-month head start can be cloned in a two-sprint sprint (their phrase, and a good one), you'd better be running fast.

The piece also nails a structural shift in competitive dynamics: Big tech no longer has the decency to be slow. Google, Microsoft, Amazon and Apple now have venture-scale speed with Fortune 10 resources. The old startup playbook—find a niche, grow before the giants notice—assumed a window of inattention that has essentially closed.

And as if that weren't enough, an ironic twist: The Federal Trade Commission's aggressive posture on acquisitions has actually made things worse for startups. Rather than acquiring promising companies (which at least provided exits), incumbents now simply build competing products internally.

Startups get neither a buyer nor breathing room. One might call this the regulatory equivalent of locking the fire exit and then complaining about the smoke.

So yes, speed matters. Enormously. Execution velocity has always been important, but in an era when the cost of building has cratered, moving fast may be the only thing standing between you and irrelevance. Point taken.

Consistency still wins

But here's where I get off the speedboat!

The fundamental problem with the "moats are dead" argument is that it confuses a

particular type of moat—one built on technical complexity in software—with the concept of moats itself.

Saying software moats have eroded does not mean all moats have evaporated.

If speed is your only moat, you don't actually have a moat. You have a head start. And head starts, by definition, are temporary.

As digital marketing training leader CXL put it rather elegantly, the difference is like a sports team's mid-season trade (a short-term roster boost) versus a strong farm system (which delivers year after year). Mid-season trades are competitive advantages.

Farm systems are moats. Speed gets you to market first; a moat is what keeps you there.

This is not an abstract point. Morningstar's research has consistently shown that companies with wide economic moats—those with defensible advantages expected to last 20 years or more—dramatically outperform those without.

When Buffett said he looks for "economic castles protected by unbreachable moats," he wasn't being quaint. He was describing a framework that has produced the most successful investment track record in modern history.

And when Elon Musk dismissed moats as "lame" in their now-famous 2017 exchange, Buffett's reply was characteristically dry: "Elon may turn things upside down in some areas, but I don't think he'd want to take us on in candy."

Morningstar's research has consistently shown that companies with wide economic moats—those with defensible advantages expected to last 20 years or more—dramatically outperform those without.

Where speed meets moats

Now, here's where things get particularly interesting for our audience. If you're reading this, you likely work in or around the IP ecosystem—patents, licensing, technology transactions. And in this world, the notion that moats are dead is not just wrong; it's almost comically wrong.

Consider the pharmaceutical industry. Drug patents remain perhaps the most powerful moats in existence. A single, well-crafted patent can protect billions in annual revenue for up to 20 years.

The pharma sector is currently staring down a patent cliff of between $230 billion and $400 billion in revenue at risk by 2032 as blockbuster drug patents expire—on products including Merck's Keytruda, Bristol Myers Squibb's Eliquis and Novo Nordisk's Ozempic.

The fact that these companies are frantically spending tens of billions on mergers and acquisitions to replenish their pipelines tells you everything you need to know about the value of a patent moat. If moats didn't matter, nobody

would be paying $10 billion in a bidding war for a clinical-stage biotech (as Pfizer did for Metsera in late 2025).

That's not a company buying speed. That's a company buying a moat.

And here's the delicious irony: Pharma is an industry that absolutely requires both speed and a moat.

Drug companies race to get treatments through clinical trials and regulatory approval (speed), but without patent protection (the moat), the entire economic model collapses.

Why spend $2.2 billion developing a new drug if competitors can copy it the moment it hits the market? Speed gets you to the Food and Drug Administration first.

The patent is what keeps generics at bay for the next two decades. The same logic applies across the technology landscape. In the AI patent wars, just four companies—Google, Microsoft, IBM and OpenAI—hold over 20,000 AI-related patents.

Where speed doesn't work

Let me offer a few analogies that illustrate why the "speed is everything" thesis breaks down when you push it to its logical conclusion.

Consider professional sports. The fastest player on the field is not always the most valuable. Usain Bolt was the fastest human alive, but you wouldn't draft him to play quarterback. In the NFL, speed matters enormously—but so does scheme, playbook complexity, team cohesion and institutional knowledge.

Speed without strategy is just chaos with better cardio.

The teams that win championships are the ones that combine talent acquisition velocity (drafting, trading, free agency) with structural advantages (coaching systems, culture, front-office intelligence). That's the moat-plus-speed model.

A new restaurant that opens fast and grabs attention with a brilliant first menu will get press coverage and a packed opening week. But without the moat—a distinctive culinary identity, loyal customer base, proprietary recipes, a location advantage, a brand—it will be displaced by the next shiny object within a year.

Speed gets you the Yelp review. The moat gets you the 20-year reservation list. Or, for a more tech-adjacent example: Amazon.

Jeff Bezos famously prioritized speed of execution and customer obsession. But he also built one of the most formidable moat ecosystems in business history—a logistics network that would cost over $100 billion to replicate, a cloud platform (AWS) with massive switching costs, a Prime ecosystem that locks in consumers with compounding benefits.

Amazon was fast. But Amazon also built walls. The speed without the walls would have produced WeWork, a $47 billion valuation that sprinted its way straight into bankruptcy.

History is littered with companies that were fast but moatless. Groupon was lightning fast to market. Vine moved faster than TikTok. Myspace was the king of social networking before Facebook existed.

Speed did not save them. What they lacked was a structural advantage that could survive the arrival of bigger, better-resourced competitors.

A new era for moats

The real lesson of the AI era is not that moats are dead. It's that moats must be earned faster, defended more actively and built more creatively than before.

The nature of the moat is changing—from static walls to dynamic ecosystems of IP, data, brand and network effects. But the principle endures: If you want to build something that lasts, you need a defense that outlasts you.

So by all means, build a faster boat. But don't forget that your boat won't go anywhere if the moat is dry.

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

GOING WITH A BETTER FLOW

Dyson's first portable, handheld fan represents company's preoccupation with air projection

A world leader in vacuum invention and innovation for decades, Dyson knows a thing or two about airflow. Its obsession with the concept has ramped up in the past couple decades as it relates to air projection.

Airflow is more than the movement of air from one place to another. In a physics and engineering context, it entails a flow of air through a space or instrument and how it moves from areas of higher pressure to those of lower pressure.

"Since 2009, we've been obsessed with airflow," said Dyson Chief Engineer Jake Dyson—"mastering air projection, reducing turbulence and refining thermal technology. The HushJet™ Mini Cool fan is the culmination of that journey: powerful airflow, engineered for life on the move by bringing elite cooling technology from every home to your hand."

Historic release

Retailing for just $99, the HushJet is the first portable, handheld fan in the company's 35-year history, said to deliver "powerful, precision airflow in a sleek, compact design."

The power and precision are manifested via airflow speeds up to 25m/s (55 mph), with five speeds plus Boost mode. The fan delivers focused airflow with reduced turbulence, even with a brushless DC motor that spins up to 65,000 RPM.

The HushJet Mini Cool is housed in a compact (33mm) package, weighing 7.5 oz. and offering up to 6 hours of battery life. It can be handheld, wearable around the neck, or desk based.

That 33mm (1.5 inches) is a special measurement at Dyson, the representation of how the company makes things smaller and lighter while better performing. It's similar to the diameter of a watch face, as well as the diameter of the Dyson Supersonic r hair dryer and the Dyson PencilVac (featured in the April 2026 *Inventors Digest*).

There's a kind of hush

Another Dyson obsession—acoustics—resulted in a nozzle with lowered frequencies that ends high-pitched whirring and whining motors.

The Mini-Cool fan comes with a lanyard, charging stand, USB-C charging cable and travel pouch. For those who want to further personalize their experience, a range of optional add-ons will be available this summer—including a universal mount designed to fasten to items such as a stroller, as well as a grip clip that securely attaches the fan to bag straps or jackets. These accessories give you even more ways to carry, display or secure your portable cooling fan.

The fan is available in three finishes: stone/blush, carnelian/sky and ink/cobalt.

Details: Dyson.com

Drafting an Application: Using the Specification

It's crucial to first legally define the invention and its scope of protection through claims **BY GENE QUINN**

You may have heard that it is inappropriate to read into a patent claim from the specification. That isn't entirely accurate, although you will hear that popular misconception repeated even by some patent professionals.

At best, the statement is half correct.

It is true that you cannot *impermissibly* read from the specification into a patent claim. Obviously, when you add the critical term "impermissibly" into the mix, that has to mean there are times when it is appropriate to read into a patent claim from the specification, which is indeed true. In fact, there is no blanket prohibition against reading into a patent claim from the specification.

The trick, obviously, is to know when it is permissible and when it is impermissible.

Claims: Your top priority

Before we can address this question head on, allow me to take a step back to fill in two gaps.

First, the term "specification" as being used here relates to the written disclosure that makes up that patent application and is not a part of the patent claims (the part that legally defines the invention) or Abstract. The specification will include a written description of the invention and of the manner and process of making and using the invention in full, clear, and exact terms so that those skilled in the technology field or science to which the invention pertains will be able to make and use the invention.

The specification must also completely describe at least one specific embodiment of the invention, whether the invention is a process, machine, manufacture, composition of matter or improvement thereof, and must explain the mode of operation or principle of operation wherever possible.

Second, any patent, or patent application, contains a variety of different sections that contain different, albeit redundant information.

Generally speaking, a patent is divided into a specification, drawings and patent claims. Only the patent claims define the exclusive right granted to the patent applicant. The rest of the patent is there to facilitate understanding of the invention articulated in the patent claims —which is referred to as the claimed invention.

Therefore, patent claims are in many respects the most important part of the patent application because these claims define the invention for which the patent office has granted, or will grant, protection.

Get your claims in order

Before proceeding, let's initially answer the pending question: Can you read into a patent claim from the specification?

Yes. The point of the specification is to act as a dictionary or glossary for the patent claims. You absolutely can define terms and concepts in the specification, and those meanings will be imported into the claims.

What you cannot do, however, is fail to incorporate an element or characterization into a claim and then point to it in the specification and say it is implicitly in the claims.

You read definitions into the claims, which requires the claim having at least a placeholder that refers back to the specification. You cannot forget to include something in the claim and save yourself because it is in the specification.

With that out of the way, let's take another step back and fill in some more gaps.

The whole purpose of the specification, as already briefly mentioned, is to facilitate understanding of the claimed invention.

In a patent application, you can define the terms you will use in the patent claims to provide the meaning you specifically intend. This specifically defined meaning will apply during any claim interpretation, whether that claim interpretation takes place during patent prosecution with the patent examiner or once the patent has issued.

But what happens when you do not define a term in the specification? Well, that depends.

As a general rule, the ordinary meaning of the term as would be understood by someone of skill in the relevant technology area or science will be used. That may or may not be bad, and it may or may not be what you intended.

You cannot fail to incorporate an element or characterization into a claim and then point to it in the specification and say it is implicitly in the claims.

The SRT example

When I teach this topic, the example I tend to use relates to "standard room temperature."

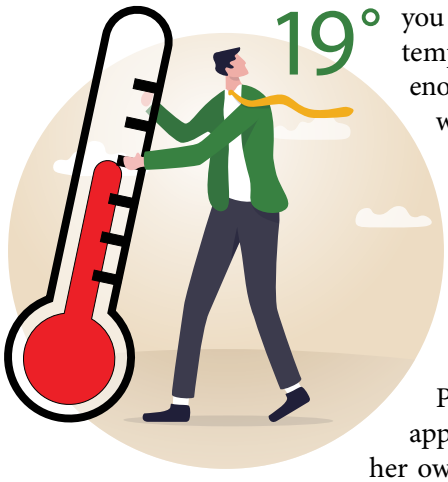
If you have invented a process that needs to be carried out at 68 degrees Fahrenheit, you might say the process can or should be carried out at standard room temperature, for example.

In the United States, standard room temperature is generally referred to as 20 degrees Celsius, which is 68 degrees F. But in some parts of the world, what qualifies as standard room temperature is a bit warmer, sometimes up to 25 degrees C.

This illustration is useful for several reasons. When you say "standard room temperature," did you even know that it has an accepted meaning in the scientific community? Were you aware that the meaning could vary, depending upon whether the person reading the disclosure is in the United States or some other part of the world?

This is where defining what you mean could be particularly important.

Let's assume that the process will work from 19 degrees C to 24 degrees C, but not over 24 degrees C or under 19 degrees C. If you simply say "at standard room temperature," that is not precise enough, and indeed inaccurate (at worst) or confusing (at best).



But could you define "standard room temperature" as being between 19 degrees C and 24 degrees C? Absolutely!

Generally speaking, the Manual of Patent Examining Procedures explains that an applicant is entitled to be his or her own lexicographer, giving their preferred meaning by clearly setting forth a definition of the term or concept. This can allow the applicant to even give meanings to terms that are somewhat different from the ordinary and customary meaning(s), although you can't define terms so that they are diametrically opposite to their ordinary plain meaning.

So, you couldn't say, "When I say 'up,' I mean 'down,' and when I say 'down,' I mean 'up.'"

What if you said something like this: "The process should be carried out between 19 degrees C to 24 degrees C, which is sometimes in this disclosure referred to as standard room temperature." That would be perfectly fine.

Moreover, if you then used the term "standard room temperature" in the claims, you would be importing that definition provided (i.e., between 19 degrees C to 24 degrees C).

If you do not define terms in the specification, they are given their ordinary meaning as would be understood by one of skill in the relevant technology area or science.

So, returning to our example of "standard room temperature," if you did not define the range you wanted to be considered as "standard room temperature" and just used that term in the claims, there would be difficult questions to answer. You could pretty much guarantee that an argument would be made that standard room temperature means nothing more than 20 to 25 degrees C, which capture temperatures that won't work, but not all that do work.

You might even have to deal with an argument that standard room temperature is only 20 degrees C because, after all, the application was filed in the United States. So, the meaning as understood in America should govern.

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.

‘I Love You … But’

Cautionary tales are a reminder not to prioritize your invention dreams before your family **BY LARRY UDELL**

“I am sorry, my dear daughter—but I had to give the money for your bicycle to my patent attorney.”

This actually happened. I was a witness when the inventor, Jack, told her that buying her a bicycle would have to wait. Her 10-year-old eyes were sad, but I think she understood and accepted his response to her question.

I have seen families torn apart because of the father or mother being obsessed with their invention. Countless times, grown, intelligent adults act like adolescents when it comes to their (oftentimes) secret brainchild.

When greed takes over

One especially sad example was an inventor who quit his job to devote full time to the dollars he visualized in the success of his creation. He called it a “Purse-Lite,” which women would put in their purses and operate simply by touch.

I arranged for the vice president of Eveready to look at it. She even covered our expenses to fly to St. Louis from San Francisco for a meeting with her and the company’s engineers.

I spent hours preparing him for the meeting and his responses when asked. Things went well—until she asked what he wanted for an exclusive license, especially since the company just opened a new plant in China that could easily produce it.

I coached him repeatedly to ask for a $50,000 signing bonus and a 12 percent royalty for the life of the patent. I already knew they would negotiate the royalty but would agree to the license fee.

I was shocked when he said $500,000—and so was she.

Her reaction was to ask him the same question two more times, explaining their cost to set up manufacturing. It was obvious she and her engineers liked the product concept and saw many other uses.

Unfortunately, his inventively disillusioned brain saw massive success and the opportunity to get out of financial problems. I had attempted to further explain to him both sides of a win-win agreement and the potential of a real opportunity.

She asked him one more time, and he said the same thing. She folded up her papers and said, “Thank you, gentlemen. We will take you back to the airport and appreciated your time.”

The ultimate result was a divorce and the loss of his two children. To this day, I do not know what happened to him.

Don’t exclude family

This story is a dramatic example of what happens when greed rears its ugly head.

Please, take your family along on your creative ride. You will find a new contentment in your mission to become a successful (and hopefully wealthy) inventor.

P.S.: Eveready redesigned the invention, which became a successful tap light especially designed as an instant light for a baby or child’s bedroom.

Larry Udell is executive director of the California Invention Center and founder of the Licensing Executive Society, Silicon Valley Chapter. He is a teacher, lecturer and consultant who has created more than 35 corporations. He consults to Fortune 500 firms and smaller businesses.

Patent Law Firms Face the AI Squeeze

Business model changing in a world where clients can internalize more work themselves **BY GENE QUINN**

All Eye on Washington stories originally appeared at IPWatchdog.com.

For decades, the patent law firm business model rested on a relatively stable premise: Companies needed outside counsel because patent work was specialized, labor-intensive, procedurally complex and difficult to scale. Law firms supplied the expertise, staffing, production capacity, docket management systems and professional judgment. Clients supplied the invention disclosures, strategic decision-making and budgets.

It was not always an elegant system, and it was certainly not always efficient, but the basic division of labor was well understood.

That symbiotic relationship is now under pressure.

As in-house patent teams rethink how work is allocated, the implications for outside counsel are unavoidable. Corporate clients are asking whether work being done by outside counsel is being performed as efficiently as possible and even starting to ask whether it needs to be performed by outside counsel at all.

Some in-house teams are wondering whether the same or better result can be achieved internally, using AI-enabled tools. If the answer is yes, clients can be expected to decrease reliance on outside counsel, looking to law firm attorneys for targeted support—not end-to-end project management.

A new inventing order

Artificial intelligence has accelerated this reassessment, but not always in the way many predicted. AI is not simply making patent work faster, cheaper and easier. It is also creating new friction for outside counsel.

A case in point is the creation of initial invention disclosures. Many clients are using AI before they have developed internal processes about what should be generated, what should be sent to outside counsel, and what outside counsel should be expected to do with the output received.

The central question for patent law firms in this new ecosystem: What is the sustainable role outside counsel can and should play in a world where clients can internalize more work themselves?

In this environment, law firms cannot assume that historical patterns and internal client practices will continue unchanged. They must be able to explain, with precision, where their expertise creates value that AI technology and available internal client resources cannot reliably and repeatedly replicate.

What work is still defensible?

Some categories of work will almost certainly remain highly defensible for patent law firms, but other work is vulnerable and increasingly likely to be in-sourced.

Initial drafting, routine prosecution and preliminary searching are increasingly being commoditized. Clients are less willing to pay premium rates for work they perceive capable of being completed with technology-enabled support. Firms that continue to treat every task as bespoke attorney labor will face stiff client resistance.

Of course, clients are not always right about what is routine or easy, or honest about what it is that they can contribute. For example, most patent practitioners do not like working with or for independent inventors or patent novices because they routinely convince themselves that patent professionals add little value and truly arduous tasks can be completely in only an hour, maybe two.

Increasingly, corporate clients who are desperate for budgetary relief and unrealistic about the role AI plays in the end-to-end patent process are sounding like that novice inventor who has absurd expectations.

Every practitioner, whether in-house or outside counsel, knows that a routine-looking amendment can create prosecution history estoppel. A minor wording change can unacceptably narrow claim scope. A careless characterization of prior art can entirely doom enforcement years later.

AI-generated content may look polished, but patent professionals know that polished writing is not the same as technical correctness. A tool that produces acceptable answers for a general business audience can produce materially wrong or misleading output in a specialized patent context where precision matters above almost all else.

What law firms can do

The best way for law firms to respond is by tightening procedures and defining expectations, obligations and responsibilities between and among the parties. Engagement letters and fee arrangements should be updated to specify what is included for a particular fixed fee, and what types of client-generated work product will trigger hourly billing or an additional fixed fee that takes into account scope adjustments.

Ideally, outside counsel should not wait until a client sends a 50-page, AI-generated invention disclosure and then complain that the project is not economically feasible within the previously negotiated flat-fee arrangement. Firms should be proactive, developing client guidelines and protocols that address AI-generated work product.

Law firms must be able to explain, with precision, where their expertise creates value that AI technology and available internal client resources cannot reliably and repeatedly replicate.

Firms that lead on process will be better positioned than firms that passively absorb the chaos that could easily upset even well-established relationships.

Ultimately, AI is forcing a more disciplined conversation about value. AI will not eliminate the patent law firm, but it is forcing patent law firms to reevaluate everything.

Firms that cling to labor-intensive workflows, vague scope definitions and opaque pricing will lose ground and become overwhelmed with unbillable work. The winners will be the firms that demonstrate that their use of AI produces better outcomes, stronger patents and more consistently predictable economics.

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.

All-time Best Inventions By Kids

As *Inventors Digest* expands its treatment of youth inventors this month with a full page of information celebrating their successes and providing information on upcoming events, we'll start with a reminder that children and teens have quite a history of accomplishment.

The best inventions are not reserved for adults. Here are a few famous ones by kids, some that have appeared in this magazine:

Hot Seat. Since 1998, over 1,000 children have died from vehicular heatstroke, with more than 7,500 injured.

For an eighth-grade science fair project, Alissa Chavez of Albuquerque, New Mexico, created the original version of her device consisting of a pad that senses if a child is left in a car seat and communicates wirelessly with a fob attached to a parent's key chain. If the parent walks more than 10 meters away without the child, it will trigger alarms on a fob; the parent's smartphone, via an app; and the car itself.

On April 7, 2015, then-17-year-old Alissa became the youngest known Latina patent holder in the United States: No. 9,000,906. She is now CEO of her own company, Assila.

Popsicle. We go from hot to cold with the fairy-tale saga of 11-year-old Frank Epperson of Oakland, California, who one night in 1905 forgot he had left his cup of soda with the stirring stick on his porch when he went to bed. When he woke up and discovered the now-frozen soda, he tasted it and had neighborhood kids sample it as well. Cool!

Frank didn't act quickly on a patent and didn't receive one until 1924. U.S. Patent No. 1,505,592 states that you can't beat it with a stick: "It is preferred in this connection to employ a stick of relatively sapless or tasteless porous wood, which will become soaked with the syrup at the outset, so that the frozen mass will not only be frozen about, but through the stick, the more firmly or intimately to be combined therewith."

Braille. This invention also resulted from an accident, though a more serious one. In 1812, 3-year-old Louis Braille injured his left eye on a sharp leather-working tool while playing in his father's shop. Infection soon set in, spreading to the other eye and leaving him completely blind by 5.

When he was 12, Louis excitedly tested a reading and writing system for blind people by Charles Barbier de la Serre. But it only involved phonetics. Braille invented a simpler, more practical six-dot code that could be read with a finger and presented it to his peers at 15.

GO FOR IT

Registration opens in August for the annual **Young Inventor Challenge**, which has a self-described mission "to inspire the next generation to use creativity, critical thinking, and STEAM skills in the invention and innovation process and to connect professionals within the toy and game industry to mentor these young innovators in their design process."

The competition allows children ages 6 to 18 to develop and pitch original inventions to major toy and game companies, industry professionals, members of the media and general public. Registrations and virtual submissions are due October 25. *chitag.com/yic*

Follow the Money

Information from Megan Pater, founder of Fund-Nation

The **Harrington Scholar-Innovator Program** scholar award is available to inventors working in biomedical and translational medicine. Up to 12 Harrington Scholar-Innovators are chosen each year.

The award includes a two-year grant; $100,000 guaranteed grant award; the opportunity to compete for acceleration funds up to $300,000; a chance to qualify for investment funds, typically up to $2 million; a personalized team of drug developers and project manager for each award recipient, and more.

The application submission deadline is June 22, 2026. For eligibility criteria and more: *harringtondiscovery.org/funding/harrington-scholar-innovator*

ID Flashback

September 2017: Burt Ward, who played Robin on the 1960s TV classic "Batman" and now co-owns Gentle Giants Dog Food with his wife, Tracy, talked about the physical hazards of doing the show:

"I was in the hospital four out of the first six days of filming: second-degree burns, broken nose ... that would be another whole interview. There was a lot of stuff that went on there. It was a dangerous show to make—and not the most comfortable costume in the world." *inventorsdigest.com/issues*

What IS That?

Sansheng's **Mini Plastic Baby Party** is a bag of 200 tiny plastic babies that pleased this customer, per a review about how she tormented her fiancé with them. "The fear in his eyes when he opens anything because he is expecting a small plastic baby has produced more serotonin than you can imagine. We will be finding these for the next 70 years. I will purchase these again."

Get Busy!

The James Dyson Award, which celebrates, encourages and inspires design engineering students, awards $8,000 to national winners and $40,000 to international winners. Past winners have tackled everything from ocean plastic to low-cost medical devices. Entry deadline is July 15. *jamesdysonaward.org*

WHAT DO YOU KNOW?

1 **His electric pen, first manufactured in 1875, was written off as a flop.**

A) Alexander Graham Bell **B)** Nikola Tesla
C) Henry Ford **D)** Thomas Edison

2 **True or false: A smartphone may incorporate technologies protected by hundreds of thousands of active patents.**

3 **Which was invented first—the electric golf cart, or the electric chainsaw?**

4 **True or false: Celebrity chef Bobby Flay has said that an Easy Bake Oven he received as a child sparked his culinary career.**

5 **Who said: "The Rock and Roll Hall of Fame is marketing. You've got a bunch of faceless people in a back room who trademark a name that sounds very official."**

A) Robby Krieger (Doors) **B)** Paul Stanley (KISS)
C) Joe Cocker **D)** Joan Jett

ANSWERS: 1. D. 2. True. 3. Golf cart, early 1930s; chainsaw, 1926. 4. True. The original, which debuted in 1963, could bake a cake from a light bulb. 5. B.

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