

Fuel Phenom

YOUNG MAN CAPTURES NATIONAL ATTENTION WITH INVENTION THAT WOULD CONVERT PLASTIC WASTE INTO FUEL **BY EDITH G. TOLCHIN**

JULIAN ALEXANDER BROWN, from the Atlanta suburb of Douglasville, is in his early 20s but already on a mission to save the world.

A high school class in welding and some downtime due to an accident led Brown to experiment with converting plastic waste into fuel. After only a few years, the owner of NatureJab has built an extensive social media following and has appeared in *Newsweek*, among other major media outlets.

His family is supportive of him. Parents Glendell and Nia Brown are college sweethearts who have been married 28 years. Julian has an older sister, Camille, who is a city planner and professional violinist, and a younger brother, Nico, who helps Julian with his other business, Jabaroma.

Edith G. Tolchin (EGT): Please share your background and how an accident led to experimentation—and ultimately, to your invention.

Julian Alexander Brown (JAB): I was born in Chattanooga, Tennessee, but my family and I moved to Atlanta when I was 4. A student stabbed me in the hand during my senior year of high school. The accident severed the tendon in my right thumb and immobilized my right hand for six months.

I have always enjoyed working with my hands, so I felt a bit lost and frustrated that I couldn't. I used that time to do a lot of reading and research. I have always been troubled by the massive plastic problem our world faces, so I began to focus my research on finding solutions.

That's when I learned about the process of pyrolysis. When I recovered from my injuries, I used the wealth of knowledge I gained to construct my first microwave pyrolysis reactor when I was 17.

I spent a short time at the University of West Georgia as a Material Science major, but

I decided to forgo college when I received an opportunity to participate in the 776 Foundation Fellowship Program. One of the stipulations was that I would have to devote myself to my innovation full time for two years and that I could not be enrolled in college.

I took the leap of faith and began this journey as a full-time inventor and innovator.

EGT: I understand that your high school courses in welding helped you create the equipment needed for this invention. Please elaborate.

JAB: Since my childhood, I have always enjoyed the balance of creating the concepts I see in my mind and building with my hands. My mother encouraged me to enroll in a welding program when I was in the 11th grade.

Our school district has a dual enrollment program where students can earn a high school diploma while also obtaining a technical skillset. Welding class was a great fit for me as someone who is kinesthetic and a tinkerer.

Welding gave me the skills to understand and implement the necessary structural and high-pressure welding required for all of my reactors. I am a certified Stick, MIG and TIG welder.

EGT: What is NatureJab?

JAB: NatureJab is a company that is pioneering in microwave pyrolysis technology, with the goal of manufacturing decentralized pyrolysis units for every city and nation on Earth.

EGT: What is Plastoline?

JAB: Plastoline is the name of the gasoline alternative I generate from plastic waste with my microwave pyrolysis reactor. It has been tested to have an octane of 110, similar to race fuel. An independent lab test verified it to have a superior chemical composition to gasoline from the pump.



EGT: What is the microwave pyrolysis reactor, and how does it work?

JAB: Pyrolysis is the process that breaks apart a material with heat in the absence of oxygen. The microwave pyrolysis reactor is a machine that converts all types of plastic waste into usable fuel alternatives and carbon black. This is the world's first solar, continuous, microwave pyrolysis reactor.

The machine operates by utilizing microwaves to break apart plastic within a vacuum environment. The lack of oxygen causes the plastic to break down into its petrochemical constituents as opposed to burning. The plastic becomes a crude oil alternative, which is then refined through the process of fractional distillation.

The distillation apparatus is heated by the natural gas alternative created by the process. The refining process creates Plastoline, Plastidiesel and Plastijetfuels.

The process is in a closed-loop system with no emissions and no waste byproducts. Additionally, this reactor is "continuous" in operation, meaning plastic can be loaded in while the machine is running. The entire system is powered by solar panels, creating a green and renewable waste solution.

EGT: Is Plastoline patented or patent pending? Any obstacles with this process?

JAB: It is patent and trademark pending.

Julian Alexander Brown developed Plastoline, a gasoline alternative generated from plastic waste with a microwave pyrolysis reactor.

EGT: What is the potential for the world with "plastic-to-fuel conversion?"

JAB: This technology has immense potential for the entire world. Through proper implementation of this plastic-to-fuel technology, the world can be cleaned of all plastic waste from the source of its production while creating additional economic opportunities.

EGT: Tell us about your GoFundMe campaign.

JAB: While I appreciate the generous fellowship grant of the 776 Foundation, it only provides a fraction of the operational costs to construct the machine and cover the maintenance, repairs and upgrades, among other expenses. As you can imagine, the components to build the machine are quite expensive.

I have two campaigns. The first was to raise money for solar panels and all related materials.

INVENTOR SPOTLIGHT

We successfully raised \$30,000 and have solar panels now! My second campaign is a fund to build and implement my first professionally manufactured machine.

I am eternally grateful to those who believe in the mission and have contributed.

To raise additional funds to support my mission, I have also started a natural skin care company called Jabaroma. My team and I manufacture natural deodorants, body butters, mosquito repellent and sunscreen.

EGT: Please tell us about safety testing at ASAP Labs.

JAB: ASAP Labs is a fuel testing company in Vancouver, Washington. They offered to test my Plastidiesel and compare it to the standards of pump diesel. Their lab results showed that my diesel has a higher cetane index than diesel from the pump.

This means that Plastidiesel undergoes more complete combustion than diesel from the pump, which makes it more fuel efficient and cleaner burning. It also creates more power and less black smoke than diesel from the pump.

EGT: You have nearly 2 million followers on Instagram! Are you on other social media?

JAB: Thank you for this acknowledgement. I am humbled to say I now have nearly 3 million. Yes, I can be found on all social media platforms with the same name, NatureJab.

EGT: What are your future plans?

JAB: The future plan is to implement and deploy the first machine next year in a plastic waste-ridden area, and to observe the impact this machine has on the community.

EGT: Do you have any advice for novice inventors?

JAB: Develop a clear vision of the purpose and potential impact of your mission and ensure that it is the primary motivator to keep you focused and going strong. With strong motivation, you can persevere despite all the challenges that come with the journey; you will remain committed until you see your vision come to light.

Over the past five years, I have experienced extreme financial instability, a life-changing physical accident which hospitalized me with second degree burns, and I have experienced life-altering cyber and physical security threats from the public. Despite all of this, I am still committed to my goals and work diligently each day to accomplish them. ☺

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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/fAGlvZJ>) and "Secrets of Successful Inventing" (<https://a.co/d/8dafJd6>).



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Best wishes, Jack Lander

1-2-3 COMMON INVENTION QUESTIONS ANSWERED

By Ben Greenberg, founder of Inventions Unlimited (inventionunlimited.com):

1 Most inventors have no shortage of ideas. What separates the ones worth pursuing from the rest?

The market decides, not your excitement. The biggest mistake inventors make is assuming that because they love their idea, the world will, too. Before you spend a dollar on prototyping or patents, validate whether the problem is real and painful enough that people will actually pay for a solution. That means talking to strangers, studying product reviews and finding recurring frustration—not compliments. Ideas are infinite; viable products are not.

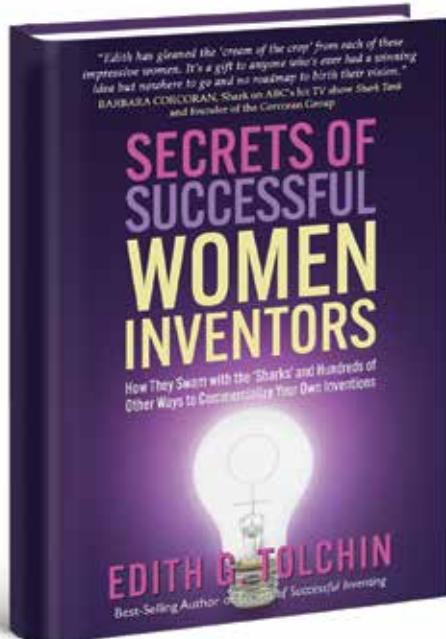
2 When is the “right” time to build a prototype?

Right after validation, not before. Prototypes are expensive learning tools, not trophies. Your first version shouldn't be pretty; it should answer one question: Does this concept actually work in the real world? Early prototypes should be rough, fast and functional: foam, 3D prints, duct tape, off-the-shelf electronics—whatever helps you test assumptions quickly. The worst mistake is building a beautiful prototype for a product no one asked for or needs.

3 Many inventors worry constantly about idea theft. How should they really think about intellectual property?

Fear of theft stalls more inventions than theft itself. Perfect protection doesn't exist. The goal is sufficient protection to move forward with confidence, usually starting with a provisional patent applications and nondisclosure agreements when needed. A PPA locks in your filing date and buys you 12 months of breathing room to validate, refine and seek partners. The bigger risk isn't someone stealing your idea; it's never launching because you were frozen by “what if.”

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Available for purchase at Amazon (<https://tinyurl.com/334ntc3w>), Barnes & Noble, and edietolchin.com.



Edith G. Tolchin
(photo by Amy Goldstein Photography)

Edith G. Tolchin knows inventors!

Edie has interviewed over 100 inventors for her longtime column in *Inventors Digest* (www.edietolchin.com/portfolio). She has held a prestigious U.S. customs broker license since 2002. She has written five books, including the best-selling *Secrets of Successful Inventing* (2015), and *Fanny on Fire*, a recent finalist in the Foreword Reviews INDIE Book Awards.

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41 "Most patents lack one or more of these elements. It's like dating. You need more than just a nice smile."

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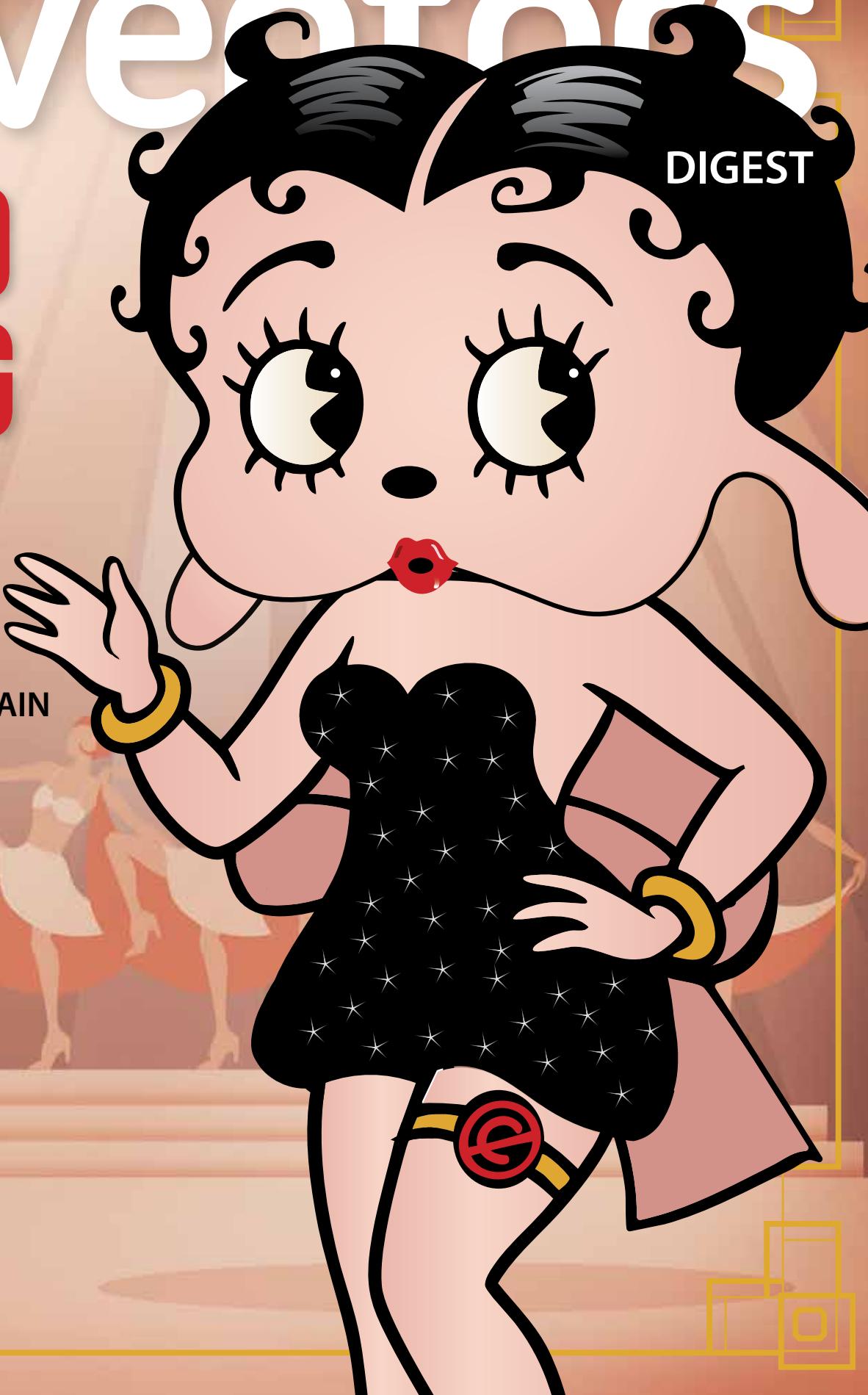
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