



LASERLAND'S STEVE MICHLIN  
SETTLES FAVORABLY WITH OEMS



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## RIDING HIGH ON PATENT SUCCESS

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A portrait of Steven B. Rech, a middle-aged man with a grey beard and mustache, smiling. He is wearing a grey suit jacket, a white shirt, and a dark tie with a geometric pattern. He is holding a large, clear plastic jug of LaserLand brand padlock powder with both hands. The background is a solid dark blue.

# Steven B. RECH STORY

*Art Diamond, Senior Consulting Editor, R*

# 3. Michlin: ARGING's BOOK HERO

Recycling Times

Steve Michlin is a graduate of the University of Michigan, having earned two engineering degrees, one in Chemical Engineering and the other in Materials and Metallurgical Engineering. He is credited as being one of the first pioneers in toner cartridge remanufacturing. Steve's company, LaserLand, makes components for toner cartridge remanufacturing based on the process of cartridge reclaiming, permissible repair and recharging.

His 39 patented inventions solved many complex problems in the adoption of the electrophotographic process to laser printers and copiers. Some of these solutions were later utilized by major OEMs, leading to a series of high stakes patent lawsuits, all of which ended in settlements.

## **Trial and Error**

"In general," Steve began, "I found that some attorneys for the giant, mega corporations were overzealous. In their zeal, they sometimes made silly errors that they could have avoided. But their clients were so big, and the stakes were so high, that during the litigation process and proceedings they made mistakes that may have influenced them to settle sooner."

He continued, "In a lawsuit you must be scrupulously honest and circumspect to avoid silly errors. For example, one expert I was up against in a patent lawsuit was a professor, previously from one of the world's most prestigious universities. He defined the word *contact*, a word used in one of my patents. He said in his expert report that the word *contact* meant that things had to touch. In my patents, *contact* meant *electrical contact* and things did not have to touch directly, just electrically."

This professor had a handful of U.S. patents of his own. Steve did a USPTO patent search. "I found that one of his patents involved electricity. And there were conditions described in his patent whereby two objects made *electrical contact* without touching each other. *Busted!* The professor was a brilliant expert but he assumed that nobody would think to check his patents on how he normally used the word *contact*."

## **Virtual Ping Pong**

Steve recalls, "An interesting, almost comical, occurrence in one of the lawsuits took place when I was deposed before two large OEMs. They questioned me for a full day at one of their law firm's offices. I had only one attorney present. The OEMs had 15 (or more) attorneys each, that is, more than 30 attorneys in total. I sat at one end of the table with a huge camera focused on me continually. The OEM's litigator sat at the other end."

"It seemed like a ping pong match because the attorneys sitting alongside the table had to turn their heads to look





Photo credit: Jerry Zolynsky, Detroit Jewish News



Steve Michlin is well known for standing and walking on his hands in various places around the world including China's Great Wall.

at me and then turn back to watch the litigator questioning me. Back and forth it went, their attorney asked a question and I fired back my answer, while all heads twisted left then right, in unison!"

The questioning was aimed at creating a theory that LaserLand sells only to remanufacturers and not to OEMs. This premise, once established, would minimize the damages they had to pay.

"I was asked whether LaserLand sells to OEMs, and if so, to which OEMs. I answered that LaserLand actually sells components to a branch of your client's giant company in Southeast Asia! That response shocked the litigator and the 30+ attorneys. They asked for an abrupt recess.

"In another case, I was asked what OEM did I help with technical support in the toner cartridge industry. My answer was *the company they were defending!* Again, the opposing attorneys called for a recess!"

### Long Live Methuselah!

LaserLand's Methuselah concept aims to make cartridge components last longer. According to the Hebrew bible (Genesis 5:21-27) Methuselah, the grandfather of Noah, is said to have lived to be 969 years old!

In addition to reducing wear on moving machine parts, LaserLand's Methuselah padding powder generally prevents or minimizes the wiper blade flipping problem because it clings invisibly to an OPC drum and wiper blade for more than 8,000 pages. Over time, wiper blades

change their molecular structure from prolonged heating resulting in a loss of stiffness and resilience. This is one of the major predictable and preventable, defect-causing problems in cartridge remanufacturing.

Drawing upon his inventive way of solving problems, and then using his training in engineering, materials science and common sense, Steve was awarded patents on custom copier and printer parts. These components prevent systemic problems from causing premature, predictable cartridge failure. In discussing these components back in the early 1990s, I named Steve's innovative components: *Superparts*.

### Superparts & the Methuselah Concept

As Steve puts it, "LaserLand's *Superparts* extend the Methuselah concept of prolonged longevity to other cartridge components, increasing their life by inventions that either prevent or offset wear. The problem could be a rotational wobble by a component that wears prematurely and becomes out-of-round. It could also be a gradual loss of robust electrical contact from an OEM pinpoint contact causing a cartridge to fail. Or, it could be a conductive plastic PCR saddle that wears down, loses its electrical properties, and causes cartridge failure."

More specifically, the following 6 US patents, awarded to Michlin, best exemplify this concept:

- US 5,367,364 and US 6,615,006: PCRConnection™ *Superpart* provides an

electrical bypass of many configurations to ensure constant electrical connection despite the loss of conductivity caused by wear on the conductive plastic saddles.

- US 5,402,207 and US 5,444,516: The SX-Sleeve™ and 4-Pin™ teach the use of a metal bushing and metal drum axle inside the OEM's plastic bushing to prevent predictable drum gear wobble caused by an out-of-round rotational bore in the gear.

- US 5,634,175 and US 5,648,838: A MagConnection™ *Superpart* replaces the point of a wire with a flange surface to provide better rotational electrical connection, for both increased image density and less waste toner.

"These patents teach the addition of a novel, long-life component, to eliminate an otherwise inevitable problem in the toner cartridge that would cause premature failure. In short, I invented *Superparts* to prevent predictable, systemic failures using the Methuselah concept of extending toner cartridge longevity." Michlin said, adding "some failures can be predicted to occur only 5% or 10% of the time. However, that is still a failure."

### Nearer to Thee

Steve Michlin is a devoutly religious man. He believes that time spent in his 3rd story, all glass, sun room brings him closer to G-d. It is there he spends much of his time mulling over technical problems, conceiving inventions, playing his guitar, or composing songs. Growing up, from 18 through 21 years



**MY 39 PATENTED INVENTIONS  
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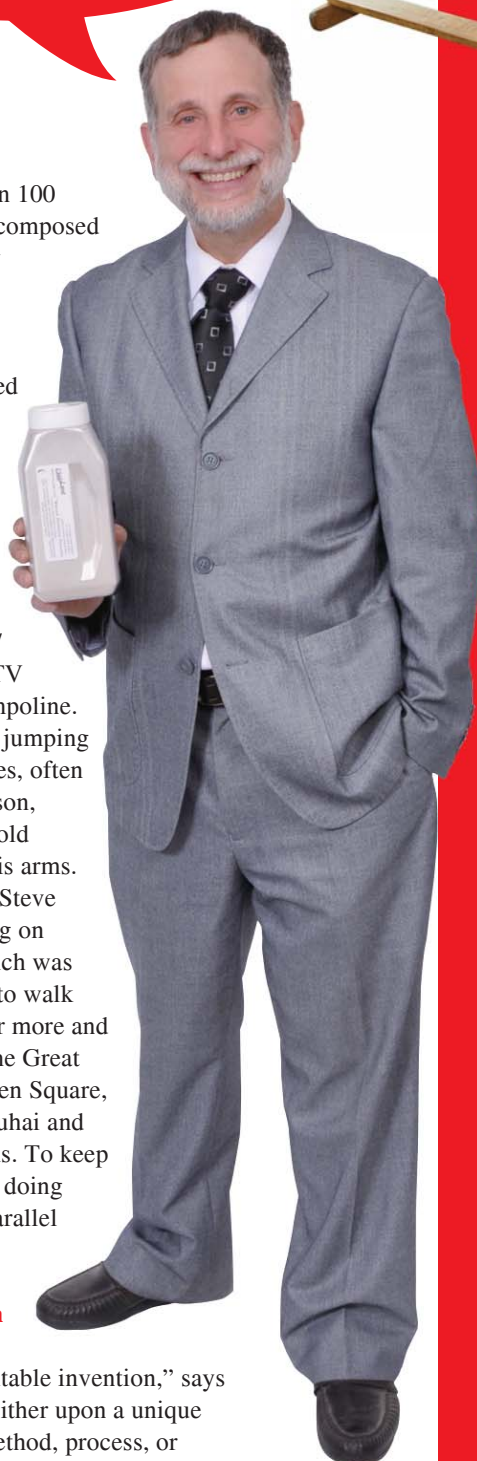
of age, he wrote more than 100 songs. More recently, he composed and recorded over 30 new songs. He attributes this high level of creativity to a divine inspiration he encounters in that hallowed place. That shrine, Steve says, spawned his many inventions, patents and song writing accomplishments.

The sun room houses his famous Super Bowl chair (Watch more: [bit.ly/michlin59](http://bit.ly/michlin59)), a projection TV screen and a full-size trampoline. Each day, you'll find him jumping on it for at least 15 minutes, often with his 3-year old grandson, Eliyahu, or his 17 month old granddaughter Rivka in his arms.

A self-taught gymnast, Steve received advanced training on his High School team which was undefeated. He is known to walk on his hands for 50 feet or more and has repeated the feat on the Great Wall of China, in Tianamen Square, Mumbai, Hong Kong, Zhuhai and other far flung destinations. To keep in shape, he works out by doing handstands on a pair of parallel bars.

#### **The Essence of Invention**

"In order for an idea to rise to the level of a patentable invention," says Steve, "it must be based either upon a unique composition of matter, method, process, or device, not obvious to one skilled in the art. Such is the essence of an invention." ■



## **Steven B. Michlin: Recharging's Story Book Hero**

*Art Diamond, Senior Consulting Editor, Recycling Times*

He floats through the air in his Super Bowl chair,  
This daring young man is a rare engineer.  
Granted more patents than others its clear,  
A story book hero rechargers declare.  
His patents are studied by those far and near,  
Who many a cartridge reclaim and repair.  
His Methuselah™ powder's pure magic withholds  
Blades from doing their flips and their folds.  
At trade shows you'll find him a Segway astride,  
Smiling and greeting his peers on the ride.  
At home he cavorts in a room made of glass  
That OEMs built with bundles of cash.  
He does acrobatics like a teenager can,  
As limber and nubile as a much younger man.  
He's settled court cases with the big OEMs,  
His clever inventions are certainly gems.  
For this ingenious and brave pioneer,  
We offer an ode to the man we hold dear.  
We salute Steve Michlin's achievements galore,  
And hope many more of these pearls are in store.

WATCH the YouTube video featuring Steve Michlin singing, playing, hand standing and bouncing to his Superbowl Chair lyrics which were featured in British, Spanish, French and US reviews, including a Fox News TV story broadcast in 50 US cities.

Watch more









STEVEN B. MICHLIN: 再生业的

# 发明大王

✍ 再生时代高级编辑顾问 Art Diamond

本期《人物》栏目的主人公为 Steve Michlin，他毕业于密歇根大学，获得两个工程学学位：一个是化学工程学位，另一个是材料及冶金工程学位。他的公司 LaserLand 为激光耗材再生、合法维修和填充提供相关配件。他被尊称为激光耗材再生业的先驱之一，也是再生行业里的传奇人物。有多传奇？你且听我慢慢道来……





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### 诉讼过程中的错误

Steve Michlin 拥有 39 个专利发明，这些发明解决了激光打印机和复印机中静电复印技术应用的多个复杂难题。这些解决方案中，部分被主要厂商所利用，后来掀起了一系列重大的专利诉讼，而这些诉讼最后又都以和解方式告终。

对此，Steve 说道：“总的来说，我发现服务于巨头公司的一些律师过于热心。由于他们的心热，有时会导致一些低级错误的产生，这本来是可以避免的。但是，他们的客户太大了，所以诉讼的影响力也非常大，以致在诉讼过程中出现了一些在别人看来不可思议的错误，这些错误可能影响他们达成和解。”

他继续解释道：“在诉讼中，作为律师，必须严谨、诚实和细心，才可避免低级错误。举个例子，我曾在一个专利诉讼中遇到一个专家。他是一名教授，曾经在一所全球最顶级的大学工作。他对 contact 这个词进行定义，这个词用于我的一个专利中。他在他的专家报告中称，contact 是指接触物。而在我的专利中，这个词是指电接触，并不是实际的直接物理接触。”

Steve 获悉，这个教授本身也拥有多项美国专利。为了更了解这位教授的

专利以及专利描述，Steve 特意在美国专利及商标局 (USPTO) 进行了专利搜索。他说道：“我发现他也有项关于电的专利。而且该项专利文件中还提到两个物体实现电接触而不用互相接触的条件。他是一个出色的专家，但竟然以为不会有人去查看他的专利，看他是如何描述 contact 的。”

### “虚拟乒乓球赛”

Steve 继续回忆道：“我曾经遇到一个很有趣，甚至可笑的案件。那次，我在两个 OEM 巨头前进行辩护。在他们的一个律师事务所办公室，他们质问了我最一整天。当时，我只有一个代表律师与我一起，而对方各有至少 15 名律师！也就是说，他们一共有至少 30 名律师在场。我坐在桌子的一端，一个巨大的摄像头一直对着我。而诉讼人坐在桌子的另一端。”

“当时的情形看起来真的很像在打一场乒乓球赛。因为对方律师们都围桌而坐，他们有时需要扭过头看着我，当诉讼人质问我时，他们又转向另一边，看着诉讼人。就这样，律师们提出一个问题，我还击一个问题，数不清有多少个回合了，当记得很清楚的是，所有的头都是一

致的一会转来这边，一会又转向另一边。”

对方的质问只有一个目的，就是要引向一个结论：LaserLand 的产品只卖给再生商，并没有卖给 OEM。这个结论一旦成立，将会大大减少他们的支付赔偿。

“他们问我，是否卖给 OEM。如果有，是卖给哪个 OEM？我回答道 ‘LaserLand 确实向某企业在东南亚的分公司供应配件，而这个企业就是你们的一个大客户’。这个回答让诉讼人和 30 多名律师都大吃一惊。以至他们不得不突然要求中场休息。”

“在另一个案件中，对方问我帮助了哪个 OEM 处理硒鼓技术问题。我的答案是这个 OEM 正是他们的委托公司！这一次，对方律师又不得不再次提出中场休息。”

### “长寿”的玛土撒拉

据希伯来语旧约《圣经》记载，玛土撒拉是亚当的第 7 代子孙，是最长寿的老人，据说他在世上活了 969 年！

LaserLand 的玛土撒拉 (Methuselah) 概念主要是指硒鼓配件的耐久性。

为了减少工作过程中打印机配件的损耗，LaserLand 发明了玛土撒拉牌垫粉，较好地预防了刮刀的翻动问题。在打





印 8,000 页纸的过程中,刮刀会不可避免地倾向感光鼓那边。长时间持续下去,刮刀会过热。有缺陷的刮刀会因为不够牢固而失去弹力。这一直是耗材再生行业中出现的一个主要难题。

Steve 借助自己在工程、材料科学和常识方面的积累,利用创新的方法解决问题,获得了不少复印机和打印机配件方面的专利。这些配件可降低硒鼓故障率。我觉得 Steve 在 20 世纪九十年代的这些创新配件实在称得上是“超级配件”。

### “超级配件”和“玛士撒拉”概念

Steve 说,“LaserLand 的‘超级配件’(Superparts)把玛士撒拉的长寿概念扩展到所有耗材配件,通过预防或减少磨损问题来延长配件使用寿命。某个过早磨损的配件引起的异常摆动、电流感应失效或塑料的导电充电辊支架磨损导致的电力性能减退等都可能造成硒鼓的运作不正常。”

具体而言,Michlin 持有的以下 6 个美国专利更详尽地阐述了这个概念:

- 美国 5,367,364 号专利和 6,615,006 号专利: PCRConnection™ 超

级配件(Superpart)为配件提供电路连接,保证在塑料导电支架磨损、导电性能降低的情况下,有持续电流可供机器运作。

- 美国 5,402,207 号专利 SX-Sleeve™ 和 5,444,516 号专利 4-Pin™: OEM 塑料衬套内的金属衬套和金属鼓轴,可防止由感光鼓齿轮旋转孔脱离圆心引起的感光鼓齿轮摆动。

- 美国 5,634,175 号专利和 5,648,838 号专利: MagConnection™ “超级配件”(Superpart),在导线某一点使用凸缘表面,提高导电性能,增加图像密度、减少碳粉废料。

Michlin 说:“我发明 Superparts,目的是要用玛士撒拉的概念来延长硒鼓的寿命,减少可预测的系统故障。有些故障出现的概率可能只有 5% 或 10%,但它们终究还是故障。”

### 神喻式的灵感

Steve Michlin 是个虔诚的信徒,他认为自己在他那装满阳光的玻璃房里度过的时光可以把他带往离神更近的地方。就是在那里,他花了大量的时间钻研技术问题、构思发明、弹吉他甚至作曲。在 18 岁到 21 岁期间,他创作了 100 多首曲子。最近,他又创作和录制了 30 首

新曲。他认为自己如此高水平的创造力来源于在那个神圣的房子里获得的神喻般的灵感。那种灵感催生了他的很多发明创造、专利和歌曲创作。

在那个充满阳光的房间里,Steve 创作了有名的“超级碗”蹦床——由一个投影电视屏幕和一张蹦床组成。他每天都和 3 岁大的孙子 Eliyahu 在自己设计的蹦床上蹦上至少 15 分钟,有时候还抱着 17 个月大的孙女 Rivka。

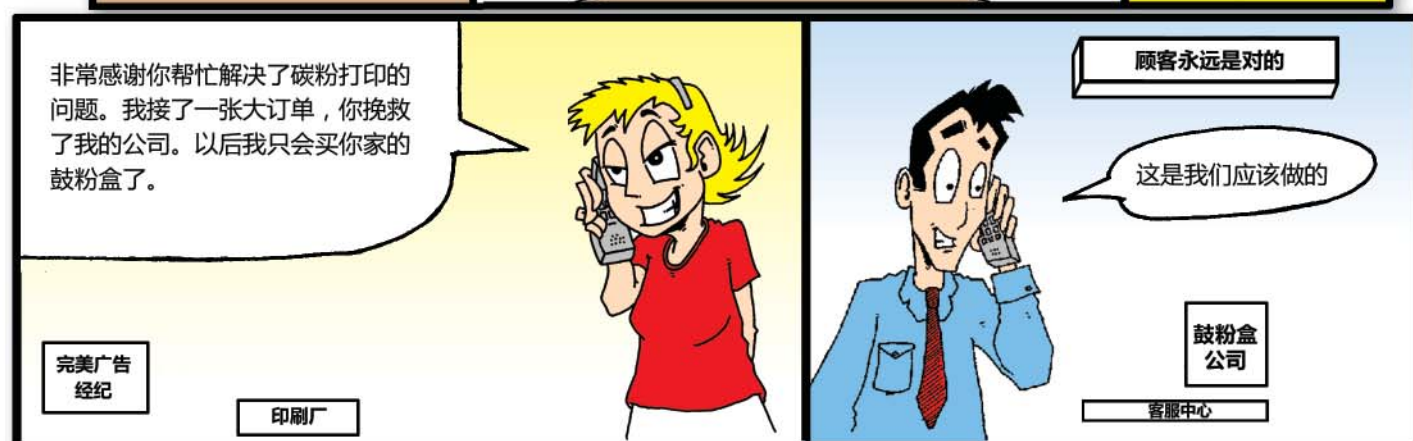
Steve 是个自学成才的体操运动员,高中时代,在战无不胜的校队里接受过高级训练。他可以倒立行走 50 英尺,还在中国的长城上、天安门广场、珠海、香港、印度的孟买等地施展过这个绝技。为了保持体形,他还坚持在双杠上练习倒立。

### 发明创造的本质

Steve 说道:“一个想法要上升到专利发明的水平,必须以改造独一无二的事物、方法、工艺或装置为基础,而且对于在这个领域里经验已经很老到的人来说,这不是那么显而易见。这就是一项发明创新的本质所在。” ■



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Your toner cartridge smeared my page. I missed my deadline. I will never buy a toner from you again.

Perfection Advertising Agency

Print Room

The customer is always right!

Let me try to help you.

Coolguy Toner Cartridge Company

Customer Service Dept.

The wiper blades have been flipping. I don't know what to do!

Remanufacturing Department

I will go to the top of the mountain and ask Methuselah!

Help!

Methuselah powder lasts 8,000 pages, unlike other powders that last 5 pages. Just use Methuselah powder and your problems will be solved.

**The Next Day**

Thank you for getting my toner working. I got a big order and you saved my company. I will buy toners only from you!

Perfection Advertising Agency

Print Room

The customer is always right!

Nothing to it!

Coolguy Toner Cartridge Company

Customer Service Dept.