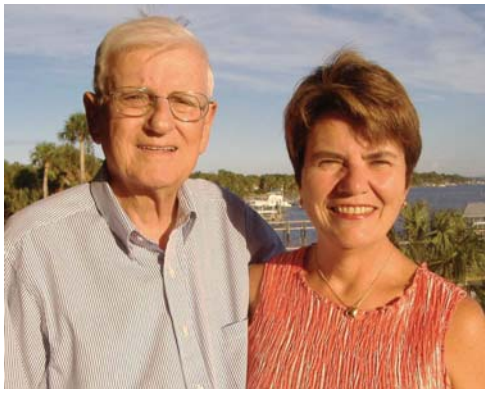
Gang-Nail's Golden Anniversary

A visit with inventor Cal Jureit & his wife Marie

by Molly E. Butz

It was a typical Florida Sunday morning in July 1955, a Sunday like any other at the church John Calvin (Cal) Jureit attended in Miami, FL...except for one thing, Cal's mind was in a receptive, exceptionally contemplative mood. In those days, he thought there had to be a better way to quickly make strong and reliable truss connections without any additional nails, bolts or glue. The truss manufacturing process needed to be done more efficiently. And then it came to him, right there in the middle of the church service.

Cal was sitting alone that morning, his late wife Mildred preparing to teach her Sunday School class in another part of the church. During the service the inspiration for solving the truss connection problem came to light. Then, like a snap of the fingers, everything came into focus and at that moment, Cal invented what would become the Gang-Nail connector plate. Call it creative genius or even divine intervention, Cal could hardly wait to get home that Sunday fifty years ago so that he could make a prototype. It only took a couple of hours with a saw, a drill and a handy bit of aluminum lying around the garage, but those two golden hours revolutionized the truss industry as we know it today.



In early August Cal and Marie Juriet, along with family and friends, celebrated the 50th anniversary of Cal's invention—the Gang-Nail connector plate—at their riverfront home in Stuart, FL.

Of course, creativity and invention were nothing new for a man who now holds more than sixty patents. But how, you might be thinking, did Cal get started? Although he had planned to become a commercial artist, and even attended the Ringling Art School after graduating from Miami High School, the technical seed was planted when Cal was given his very first "engineering" assignment back in 1941. To celebrate the city of Miami's 44th birthday, the bakery Cal's family owned was commissioned to create a birthday cake replica of the Dade County Courthouse. Cal went to work creating a complete, lightweight wood framework to support the cake. Lighted windows and all, the six-foot-tall, 750-pound cake made its way safely to the party in the back of the bakery's pick-up truck and into the stomachs of the 1,000 rather impressed guests.

Life has a way of taking unexpected turns and, rather than finishing art school, Cal served with the Navy Seabees in the Pacific during World War II. After returning from the war, he earned his Bachelor of Civil Engineering from Georgia Tech in 1949, the institution that inducted him into its Engineering Hall of Fame in 1996. After a brief time in Toledo, OH, at an engineering consulting firm where he became a registered engineer, Cal returned to his roots in Miami and began work as the chief engineer for a commercial testing laboratory that tested all kinds of building materials, including roof trusses.

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at a glance

- Inventor Cal Jureit created a prototype of the Gang-Nail metal connector plate fifty years ago.
- Jureit's plate had metal teeth, eliminating the need for materials like nails, bolts or glue to be used in wood truss manufacturing.
- Jureit's company Gang-Nails, Inc. became Automated Building Components, Inc. in 1961, and is now MiTek, Inc.

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Cal found he was spending more time helping his clients improve their roof trusses than actually supervising tests. This work led him to another chief engineer position with a company that specialized in engineered timber products, glued-laminated beams and, of course, trusses. *The progression of his career path makes it easy to see what was coming next.*

In May of 1955 Cal started his own engineering consulting firm working from his home. He focused on soil mechanics and foundations, as there were no other soil specialists in Miami at the time, but truss construction was never far from his mind.

"My work at the testing lab helped me grow increasingly familiar with the truss connection problem. Then, while I was working at the timber products company, I was up close and personal to it," Cal recalled. "There were enough trusses being used at the time that the builders were already warming up to the fact that trusses were the way to go. I could already see it was going to be a big industry. We just needed a better way to do it!"

Then on that July Sunday in his Miami church, the idea for the Gang-Nail was born. Shortly thereafter, the name for the invention "came to me in the shower," Cal recounted. Although his wife objected to the name's negative association with gangs, the "gang of nails" moniker stuck.

"This is a man who thinks everyone should realize the obvious," Cal's wife Marie told ***SBC*** staff, referring to her husband's persistence in streamlining the manufacturing process. Cal chimed in, "You just scratch your head a little bit and think. It's not that hard!" For a man like Cal, invention is just that simple.

And although Cal made it sound like a breeze, growing a plate manufacturing empire was anything but easy. Just finding someone to make the plate was a challenge. "I didn't want to sell the idea; I wanted to be the engineer and have someone else manufacture the plates," Cal stated. "But what I found out is that, in Miami, you had to do it yourself. The first die shop I went to didn't have time to make revisions to the die after their initial work, and, before I knew it, I was putting up a building and making the dies myself. I had the tiger by the tail."

As the truss industry began to grow, those who were largely interested were lumber companies. They already had the main supply (wood), and they wanted to know how they could get a truss fabrication company set up and do it "low dollar." But low dollar start-up was more difficult than it might be today because at the time, the equipment these manufacturers needed simply did not exist. Cal described it as the old razor-blade principle: "give 'em the razors, and they'll come back to you for blades." So overnight, Cal was not only making plates, but he was also making the equipment to utilize them.

"...you just think of a good little project, and go to it."

"Commercially, finding presses on the common market that were wide enough to handle trusses was difficult," Cal explained. And even when they were "available" through press manufacturers, delivery time and price tag made them hard to come by.

As Gang-Nail plates went gangbusters, Cal was simultaneously expanding his engineering consulting business that helped fund his growing truss industry business. By 1960, he sold that business because he could no longer dedicate enough time to consulting. It was in 1961 that Gang-Nails, Inc. went public and changed its name to Automated Building Components, Inc. (ABC).

When ABC began advertising in many of the national builder magazines, the results were significantly farther reaching than Cal had expected. What he soon found was that many other countries monitored American building publications and in less than a year, Cal was "planning a 'round-the-world' trip to do more promoting and set up various partnerships around the globe," he remembered.

With lightning fast speed, truss fabricators were popping up all over the U.S. and the world. The years continued to be filled with one "crazy idea" after another, from talking his brother, a successful attorney and CPA, into giving up his career for a job at ABC, to inventing an inexpensive concrete tank press that you could "pour in your backyard."

Unfortunately, these new-fangled trusses were sending up some red flags for the building officials, especially some of the regional code authorities. The necessity to deal with the issues eventually brought all of the competitive connector companies together at a meeting in Miami in 1960 where the Truss Plate Institute (TPI) was formed. Cal led TPI for two years as the President and contributed greatly to what became TPI-60, "Design Specification for Light Metal Plate connected Timber Trusses."

The industry continued to surge forward, and ultimately, after many years of hard work, Cal and the other stockholders sold ABC in 1979, which, through a handful of historical twists, is now MiTek, Inc. Although he remained on the Board of Directors and stayed on as a consulting engineer for several years, eventually his involvement lessened. Now his activities revolve around music, traveling abroad, reading and enjoying time with Marie, family and friends in Stuart, FL and Elsah, IL.

When Marie unearthed the Gang-Nail prototype in their basement last summer, "All of a sudden I realized it had been fifty years," she recalled. "That's something worth celebrating!" Marie swung into action and in early August Cal and his family and friends celebrated the 50th anniversary of his invention at their riverfront home in Stuart. Among many of the weekend's activities, a tribute banquet and one of the world's top theatre organists, Walt Strony (Cal's an avid theatre organ buff), commemorated the event.

"He was always out there in the forefront making wild decisions," Marie concluded. But if you ask Cal if he had ANY idea the Gang-Nail would revolutionize industry, that down-to-earth businessman smiles and comes straight out and tells you, "Naw, you just think of a good little project, and go to it. I didn't know what I was accomplishing at the time; it just looked like a profitable career that also involved engineering."

So there you have it: a lifetime of hard work, creativity and passion mixed in with a few crazy ideas and a handful of wild decisions. We don't care how you define it, Cal; where would we be without you today? SBC

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