Hickory Along The Hudson

DRUM! Tours The Vater Stick Factory

By Steve Holt

South of Boston, blue- and white-collar towns spread across gentle flatland filled with pines and oaks and dotted with ponds. Though many of these burbs today are home to commuters who work in Boston or regional office parks, in the early days of the industrial revolution this was a center of American manufacturing, with rivers powering little mills in every town.

Today, a lot of jobs have migrated to warmer climates and cheaper labor. But some have persevered and thrived, hunkered down in industrial parks and tilt-ups, rather than along riverbanks. You get the sense these firms have the same rugged commitment to quality as their New England predecessors. One of them is Vater Percussion, a 20-year-old stick company with an even longer pedigree in the drum industry.

Spend a day in the industrial park with stick makers Alan and Ron Vater, and you learn about their obsession with wood. The brothers have built their business around that love, and have even sloganized it: "Good Wood ... Perfected."

They firmly believe the quality of their product is second to none. "Wood is wood, but what do you do to wood?" asks Alan, the vice president of the Holbrook, Massachusetts company. "What do you do to make it different? What can you do to make it better?"

According to Alan, Vater's answer is tough-minded wood selection, the company's unique back-knife lathing process, and a drying-and-finishing process that seals an optimal amount of moisture into the stick. But that's only the scientific part. There's also a human element that can't be ignored.

And that is personified in the Vater brothers themselves, who developed their process through sweat equity.

It began with their dad, Clarence "Clarry" Vater, hand-turning sticks out of Jack's Drum Shop in Boston in the 1950s. Later, they would produce sticks for numerous brands worldwide before "going solo" in 1991. Alan says Vater's experience working with discriminating companies proved invaluable once he started selling sticks under the Vater name.

"All that knowledge that I had learning through the years — what certain companies like for their model designs — I absorbed all that, and I designed our own line," Alan says. "And we did it with a different flavor."

The company now offers 238 stick varieties, and more than 20,000 of them roll off Vater's production line every day to be shipped to 55 countries around the world. No one knows more about Vater's manufacturing process than Billy Clark, a family friend who used to play street hockey with Alan and Ronnie when they were kids. Clark has managed the production floor at Vater and all its previous iterations for 32 years.

"What's made the production so successful is the way the company grew slowly over all the years," says Clark. "We've changed whatever we need to keep up with the sales. The more sales we get, I don't see any number [of sticks] we wouldn't be able to handle."

Proof is in the pudding. Vater Percussion now straddles two sides of Centre Street, with its original location hosting the production facility while marketing and sales offices share the new, adjacent building with an expansive warehouse.

The company buzzes with activity as I descend to Vater's production floor. The first thing that hits me is the noise. Blaring rock music provides an appropriate backdrop to a symphony of screaming motors, buzzing saws, and humming hoses. The next thing I notice is the strong essence of wood — mainly hickory. Its sweet aroma follows me everywhere.

Step 1: Wood Selection

Around 85 percent of the sticks Vater sells are made of hickory, a tree native to the United States. Vater buys its hickory and maple dowels from seven exclusive distributors, all of which Alan periodically visits to ensure material quality.

Only a select cut from the tree's butt is used to produce dowels. Secondary branch cuts aren't considered. "To get a real good stick out of the trunk, you're only using a very small portion of the wood," Alan says. "Only the 3–5" of the outside of the tree are used, because that's the sapwood. So you're starting with really good wood."

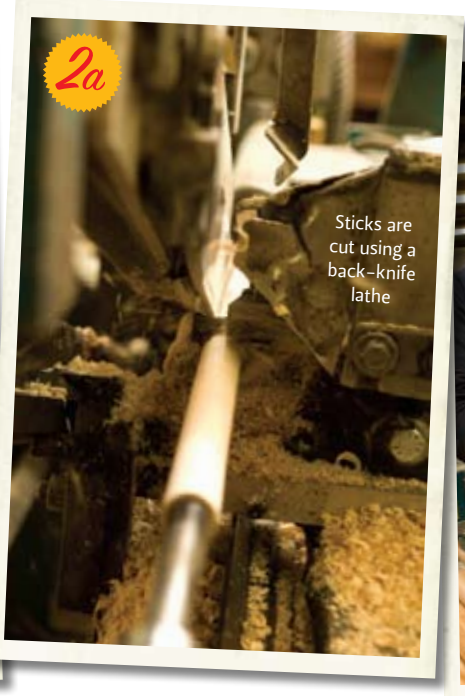
This is where Alan's knowledge of and love for wood comes in: He carefully inspects each shipment of dowels Vater receives, taking a deep whiff from the pile and checking for moisture content, staining, and knotting. He can be picky, and is known to return deliveries that don't make the grade.

Step 2: Back-Knife Cuts

Every one of Vater's wood sticks is cut using a back-knife lathe, many of which vice president Ron Vater purchased used and then refurbished himself. The lathe makes three cuts on each stick: a die cut, a roughing cut that follows the template, and a final back-knife cut of .003–.004" that gives the stick its distinctive profile.

Alan contends that other stick companies use grinders — two stones rotating against one another — to shape the dowel into a stick. But because the process produces so much heat, water must be continuously poured over the dowel to keep it from burning.

Each of Vater's lathes can be easily calibrated to cut any style of stick needed. Production manager Billy



Clark knows precisely which stick is being made on any given lathe, a responsibility with no room for error. "They cut 400 sticks in a matter of two minutes," Clark says. "So if you have the wrong cut, in two minutes you could have 400 sticks just ... *gone*. And you wouldn't even know it."

To forestall such an error, Vater visually inspects the sticks to monitor the production process and determine if any adjustments need to be made to the machine. Workers also roll 200 sticks from each batch to check for straightness and record the findings to determine the percentage of warped sticks in the batch.

Step 3: Sanding

In the blink of an eye, freshly cut sticks are sent over to another machine to undergo a two-part sanding process using two different grits of sandpaper. This proprietary system replicates handwork processes that were once the industry norm, and ensures that every stick is sanded evenly, with impeccable consistency. But you can never be too sure, so the sticks are once again subjected to a visual inspection and rolling test before moving on to ...

Step 4: Tip Shaping

Yet another machine shapes tips on wood-tip sticks using a knife blade that corresponds to the size of the stick and the shape of the tip. Vater makes five shapes of wooden tips — teardrop, barrel, ball, acorn, and oval — as well as a dizzying variation of each.

"Drummers are always saying, 'Could you just add a little to the tip?' or 'Could you just take a little off of this?'" Alan says. "It's interesting to listen to them. You try to do whatever you can to listen to their needs." I soon found that this was no unfounded boast.

Step 5: Sealing And Finishing

After rolling and inspecting the product yet again, the sticks are sealed within 20 minutes of being sanded and shaped. In order to do so, batches of unfinished sticks are placed into a revolving tumbler that evenly applies both sealer and finish.

Sticks are sealed quickly at Vater in order to retain as much moisture as possible. Moisture adds weight to the stick, an attribute Alan says many drummers seek because of the added throw and rebound off the head. As moisture is removed, more cellulous fiber is damaged, weakening the stick. "There's a real science to the whole thing," he says. "There's a lot to it, thank goodness."

Step 6: Nylon Tips

Unlike wood-tip sticks, nylon tips are applied only after the sealing and finishing stage. These models are sent over to a machine that spins the stick while glue is applied evenly around a nub onto which the nylon tip will be affixed. The bond is both chemical and mechanical, since the nub features a small bulb chamfered onto the sides, which works in tandem with the glue to lock the nylon tip firmly into position using air compression.

Step 7: Final Inspection And Roll Tests

After it's sealed and finished, Vater dries a stick for 16–24 hours before subjecting it to two last phases of roll tests to ensure material and aesthetic quality. First, each stick is rolled down a set of 8' steel pipes by a quality-control expert, who removes any that show warping or such visual blemishes as mineral streaks and "bird pecks" (small chips in the wood). These sticks are set aside to become second-quality sticks, for which Ron says there is a large market.

Sticks that pass the first roll test now go through a second one, usually conducted on a black Formica tabletop by Alan Vater himself. Sticks that are considered straight and unblemished are deemed first quality and saleable.

Alan says he loves taking an active role in the process. "I'm in here every day, hands-on, and that's the way I like it," he says. "I will do it that way forever. It's an essential part of growing and making sure that we have the best product on the market. I don't think there's any other way to do it."

Step 8: Ink Labeling

The distinctive Vater "V" is now applied to each stick using a pad-printing machine. Chris Whittemore, who has been with Vater in a number of different roles for four years, is refilling the black ink and setting up the machine to label a batch of sticks. Two silicone pads lift the logo from a self-inking metal plate etched with the Vater logo and model name, then descend on the sticks and apply the label.

Whittemore hand-checks the first several sticks that come off the line, discarding one or two with off-center or smudged labels before resetting the plate and letting the machine finish. Within a few minutes, a box on one end of the machine is brimming with labeled sticks.

Step 9: Pitch And Weight Matching

Vater's attention to detail is most evident in the room where sticks are matched for weight and pitch. Here the machinery looks like something out of the future. Each stick is placed in front of a microphone and tapped several times with a metal rod, which registers the density and pitch on a computer monitor in both numerical and graphic form (not unlike an EKG). With painstaking accuracy, the tapper takes three samples before determining the average weight and pitch, before the stick is placed on a super-sensitive scale to determine its weight.

Using this data, the sticks are then sorted into a bin that resembles a huge wine rack. Each of its compartments represents a unique combination of weight and pitch (Vater uses eight weight classifications and ten pitch parameters).

Step 10: Color Matching And Sleeving

Pitch- and weight-matched for optimal balance and feel, the sticks are then color matched for perfect aesthetic balance and placed in Vater's signature blue, barcoded sleeves. This affords the last human contact with the stick and thus the last chance for a sub-perfect stick to be downgraded from first quality.

Step 11: Plastic Wrapping

To dramatically decrease the potential loss of moisture in the sticks and prevent warping while they are stored and shipped, bricks of 12 pairs are shrink-wrapped in plastic. The finished sticks are then boxed and sent to the Vater warehouse across the street to be put in stock and shipped to dealers, distributors, and artists. While it's almost hard to believe, due to the efficiency of Vater's production process, a stick made on Monday is in stock on Tuesday.

The Future

What's on the horizon for Vater Percussion? Only about 30 new stick models coming out in early 2010, almost entirely based on requests and suggestions submitted on the Vater web site. These include a wider selection of sugar maple and nude models — both of which have sold well — as well as a splash stick made out of bamboo rather than birch.

"We're just listening to what people want," says Alan, "and we're trying to meet the need." ■


9
Each stick is struck with a metal beater to determine its pitch


10
Pitch- and weight-matched sticks are paired and sleeved


7
Alan Vater personally conducts the final roll test for every batch


8a
Small-run vanity sticks are labeled by hand, one-by-one


8b
A pile of logo stamps wait their turn for the ink pad