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Residential Furniture — Free-Standing 2007

Michaelle Bradford
mbradford@vancepublishing.com



It All Ties Together

A continuous piece of walnut connects with an ash bridge to form suspension-like parabolic shapes.

Suspension cables found on bridges, like the Golden Gate Bridge in San Francisco, form parabolic curves when other connecting cables tie them to the deck below. The winner in the Residential Furniture — Free-standing category replicates these types of curves by using single pieces of steam-bent walnut that connect to ash “decks.”

Seth Rolland, owner of Seth Rolland Custom Furniture Design, Port Townsend, WA, has been working on a series of sculptures that feature one piece of wood that is cut and steam-bent apart. “I have a few different bodies of work, but one of them is where I’m taking a single piece (of wood) and expanding it — cutting from both sides and expanding pieces in two different directions,” he says.

While exhibiting at an art fair, a couple Rolland had created tables for in the past approached his booth and saw these wood sculptures. “They really liked them,” Rolland says. “And they asked what I could do with (these shapes) and

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whether I could make a table using them.”

Rolland took the challenge and created a model based on the dimensions given by the couple, who wanted the table to go below a window in their dining room. Because of where the table was going in the house, its specifications were not standard. “Its sort of an odd height. It’s taller than a coffee table and shorter than a hall table,” Rolland notes.

The main pieces in this “Parabola” side table are fabricated from walnut, which is known for having moderate bending and crushing strength and has a good steam-bending classification. Ash is used as the main L-shaped connectors at the top and bottom of the table, and cherry is used to connect the separate pieces of walnut at the top. Rolland says he wanted the two main walnut elements to read differently than the connectors. “From the top, the two ash pieces look like a butterfly. Since it’s a low table, I chose these dramatic pieces of wood to help the elements read better, so that the walnut shows up as two strong triangulated structural elements, like a bridge.” The ash pieces offer complementary curves at the top and bottom, and the cherry pieces at the top offer a transitional color between the two, Rolland adds.

The continuous walnut pieces are triangulated in 84 directions. There were some challenges creating successful structures, although Rolland says he has done quite a bit of steam-bending and experimenting with forms that can be achieved from wood by not cutting it all the way apart. “There were a number of failures on the way to getting two successful ones,” he says. “Any sort of internal flaw or strange wiggly grain will make (the wood) bend unevenly and not look good.” Rolland says he bent a “fair number” of extra shapes and then picked the best two.

Another challenging aspect of this mathematically intriguing piece was balancing the geometry of the intersecting curves and having the two interact equally. Fitting the walnut to the ash was difficult because of all of the angles involved, he says. The top and bottom ash pieces are laminated so that the grain “flows around.”

Seth Rolland Custom Furniture Design
Townsend, WA
www.sethrolland.com

Project: Parabola Side Table

Year Established: 1990

of Employees: 2

Shop Size: 1,100 sq ft

Specialty: Custom-designed and built interior hardwood furniture.

Project Notes: The main

“When I do a sculpture, there is

elements of this table are created from single pieces of walnut that are triangulated into 84 different directions.

one (piece) and it can sit any way. It doesn't have to be so identical to another piece. So this involved getting all of the connecting pieces at exact, but different, angles,” Rolland adds.

In discussing the uniqueness of the “Parabola” table, Rolland notes that most furniture is created by taking large pieces of wood and turning them into smaller pieces and then gluing them back together into a whole. With this table, the main elements of wood are not cut apart.

“It's working within the constraints of what the wood fibers will allow you to do without being cut apart and reattached at a different angle,” Rolland says. “It's sort of pushing the material and the abilities of the material to take on a (complex) shape.”