Luminaries

keep New England in the design limelight with new technology and old-school techniques

Besting Ancient Rome

Lunaform’s jumbo urns and planters are a marriage of ancient Roman and 21st-century technologies. With shared backgrounds in design, architecture, art, and small business, founding partners Dan Farrenkopf and Phid Lawless opened Lunaform in coastal Sullivan, Maine, in 1992. Their mission: create garden containers—both grand and modest—strong enough to endure Maine winters and Arizona summers. Add to that stunning designs and eye-catching finishes, and it’s little wonder Bill Cosby and Martha Stewart just had to have some for their own gardens.

Similar to conventional pottery, Lunaform’s pieces are crafted on a wheel, but the similarities end there. Instead of clay, Lunaform uses a proprietary recipe of concrete fortified with polymers and reinforced with steel. “Needless to say, the ancient Roman recipe for concrete is strong and lasting,” says Farrenkopf. “But as the water evaporated, tiny holes were left behind, which in our formula is countered by the addition of polymers, which fill those voids with plastic and both strengthen and waterproof the piece.” Brushed-on liquid metal finishes give the vessels a finish ranging from bronze to copper. And says Farrenkopf, water features, which they can either just design or completely install with pumps and plumbing, can be added.

The studio, which employs five artisans, is completing a permanent 15-vessel installation commissioned by the city of Boston for the park at Post Office Square. With Lunaform’s technology, it might outlast the Colosseum.

—John Budris

Lunaform, Sullivan, ME; 207-422-0923, lunaform.com.
Heavy Metal

“EVERYTHING IS MADE as it was in the 1800s,” says Eric deLong, president of Tremont Nail Company, the oldest steel cut nail manufacturer in the country.

Founded in 1819 by Isaac and Jared Pratt in Wareham, Massachusetts, Tremont was a fixture in that coastal town until it was sold six years ago to Acorn Manufacturing, makers of restoration hardware, which moved it to its headquarters in Mansfield, Massachusetts.

There, the steel cut nails that restoration specialists seek are still made as they were 190 years ago. “We have 24 machines producing 19 different types of nails,” says production controller Larry Bickett. “Two of the machines were built in 1990 from patterns used in the 1800s. Parts from old machines are still used.”

Although the studied textile weaving in Bali, net building in India, and lace making in Lithuania, the use of modern technology to articulate unseen connections and elemental structures is Echelman’s forte, and she is constantly influenced by the engineers, architects, designers, and fabricators with whom she works. These days, they are the researchers at Massachusetts Institute of Technology’s Center for Bits and Atoms, where she is helping create an armature for a sculpture that changes shape with fluctuating temperature. Soon she will begin a residency at The Broad Institute of MIT and Harvard University, where the human genome was sequenced. Her fans can’t wait to see what new work that might inspire.

— KATIE GLEYESSEN


Waves of Grace

JANET ECHELMAN’S ROOTS are in New England, but her experience and influence can be found in the graceful volumes of shadow and light she has created for public spaces in more than 11 countries.

From her studio in Brookline, Massachusetts, she has produced art installations using woven fiber or atomized mist to create pieces that respond to wind, water, and light. Her work includes the Water Sky Garden at the 2010 Vancouver Olympic Winter Games and the recently completed Every Beating Second, an indoor installation (rare for her) at San Francisco Airport. In the works is Puls, a piece at Philadelphia’s Dilworth Plaza that will trace three subway lines running beneath it with colorful 5-foot walls of mist activated by train arrivals and departures.

“The site had been the city’s first waterworks and then the hub of the Pennsylvania Railroad in the era of the steam engine,” says Echelman, who compared the piece to “an X-ray of the city’s circulatory system.”

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PHOTOGRAPH BY CHRISTOPHER HARTING

PHOTOGRAPH BY DOUG MINDELL
Window to the Past

ROBIN NEELY HAS been a stained-glass conservator for decades, but her job description is ever changing. Researcher, painter, analyst, historian, puzzle solver — it’s all in a day’s work for this seasoned artisan, whose restorations and reproductions can be found in churches, institutions, and museums, including in the Museum of Fine Arts, Boston, where she re-created Colonial windows for the Brown-Pearl Room.

“Every window is different. It’s like restoring a house. Every house requires different work, as does every window,” says Neely from her studio in Westbrook, Maine. She relocated in 1991 from New York City, where she was a project manager for a stained-glass studio, to open her own firm, and since then has taken on challenges that run the gamut of disrepair. She spent two years working on the 30-foot skylight in the three-story open foyer at the Victoria Mansion Museum in Portland, Maine. That masterpiece had been knocked out by a hurricane in 1938 and all that remained were mere fragments stored in a box at the back of a closet for 60 years. With no drawings, images, or descriptions to aid her, Neely spent 12 months researching (which included “a lot of standing and staring”) to decipher the pattern, and then set to work on fabrication, which included a painstaking process of precisely matching to the existing white glass.

“It is the many layers of work — the technical elements along with the historical threads — that continue to capture Neely’s attention. “I feel like I become very intimate with not only the window, but with the artist, the building, and the time period. They’re right behind me, looking over my shoulder.”

— DANIELLE OSSHER


Midnight Sun

THE PESSY THING about solar electricity is that it only flows when the sun shines. Perfecting the efficient storage of generated energy for 24/7 use is the Holy Grail — something a team of scientists at Massachusetts Institute of Technology, led by professor Daniel Nocera, is well on its way to achieving. Its breakthrough technology uses the sun’s energy to split ordinary tap water into hydrogen and oxygen, gases that have up to 1,000 times more energy-storage capacity than the inefficient and costly batteries used today.

With Nocera’s development, which uses abundant and inexpensive catalysts (cobalt and a nickel-molybdenum-zinc alloy), the gases are simply stored in tanks until needed. Pass them through a fuel cell (a technology that already exists), and voilà, serious amounts of round-the-clock electricity.

Nocera envisions a time when every home will be its own power plant, with solar panels on the roof, hydrogen and oxygen tanks in the yard, and a fuel cell in the basement. “Plants have known how to store sunlight for billions of years,” he says. “Now we can too.” The Cambridge, Massachusetts-based company he founded in 2008, Sun Catalytix, is working to commercialize the process developed at MIT. It just unveiled a wireless catalyst wafer that can access the energy generated by solar panels and convert it to electricity without physical connections of any kind: “You just drop it in a glass of water, and it starts splitting it,” he says. Going green might, someday, be as simple as that.

— BRUCE IRVING