



WORKBENCH

BINDING METAL

Three years ago Matt White, along with his brother John, founded Heritage Metalworks, creating and restoring decorative pieces in brass and bronze

BY LEW LARASON

After graduating from Boyertown High School, Matthew White attended college briefly. However, he soon realized the academic world wasn't for him. Since he always had been artistic and liked working with his hands, especially when it came to three-dimensional art, Matt took a job at the Franklin Mint. "I really liked it there," he said. "I learned design, how to make prototypes, molding, casting and so much more." Continuing, he said, "It all came naturally to me. Art always has been in our family. My mother has designed and made bears for several years."

After leaving the Franklin Mint, he worked in a couple of different metal shops before deciding to go into business for himself. He started in his parents' basement, using a few tools he had acquired or received as gifts. After outgrowing the basement, he moved into one side of a two-car garage. When the other half became available, he quickly expanded into the whole building.

About three years ago, Matt's brother, John, joined the business. They called their venture Heritage Metalworks and moved into a shop in Guthriesville. This facility quickly became crowded with tools, materials, pieces to be restored and lots of works in progress. It once again was time to expand. The brothers and their two employees now are in the process of relocating to a much larger shop near Downingtown. Along with extra room



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in which to work, they also will be opening a retail store in the facility. "With the extra room, we'll be able to work more efficiently and, therefore, get more jobs out quicker. We also will be able to add four or five more employees, since we'll have the space and the work," said John.

John also graduated from Boyertown High School, and then attended Dickinson College, earning a B.A. in economics. After graduating from college, he was involved in the business world. Before joining his younger brother, he operated his own enterprise, unrelated to metalwork. When needed, he helps with some of the jobs related to creations in the shop. However, his main contribution to Heritage is in the business end. Along with purchasing materials, pricing, billing and other things having to do with keeping the operation running smoothly, he also decides about advertising and arranges the details for the craft shows in which they participate.

Along with designing and crafting many original pieces, most of that handled by Matt, they also do a lot of restoration on early lighting, locks, iron fencing and other metalwork. Another important part of the business is fabricating reproductions of nearly anything metal. With more than a notch of pride in his voice, John said, "One of our brass chandeliers was mistaken for the real thing while it was hanging in a shop." Matt added, "That's one reason we make sure we stamp our brand on everything we make." To this John explained, "That way, there won't be any questions or mistakes later."

Lost wax or investment casting is part of Heritage's creative abilities. The term "lost wax" refers to the fact that the wax disappears from the casting. Investment casting means the item to be cast is completely enveloped. This form of casting is an extensive operation. First a wax model is created. It could be an original design or a copy of something needing to be replaced or reproduced. If it's an original piece, a sculptor designs and crafts a model. Once the wax has the

form and details wanted, a mold is built around it. This is done by building up a series of coats of silicon. The first layer is as fine as dust. Each successive coat is a bit coarser than the previous one. After there are enough layers to form a sturdy mold, it is allowed time to dry.

When Matt is ready to cast, he heats the kiln to between 1,500 and 1,800 degrees F. The wax and mold are carefully put into the hot kiln. It takes about 20 minutes for the wax to completely melt away. However it is "captured," so it can be used again for another casting after it has solidified. The very hot, now empty mold is removed from the kiln. Next, molten metal, usually brass or bronze, is very carefully poured into the hot mold. Matt and whoever helps with the operation wear protective gear while working with the molten metal. After it has cooled and solidified, usually five minutes or so, the mold or investment is broken away.

This method of casting is very time-consuming. Also, the mold can be used only once. Because the wax has been melted away or lost, and the mold is broken from the casting, it is destroyed. However, if everything has gone well and everyone has been careful, the casting will be exactly like the wax original. Matt works so carefully with the process that he even has a sample casting showing the fingerprints of the last person who handled the wax original.

Their lost wax creations vary, some being their own original designs, while others are copies of antique items, old pieces that have been altered to suit a customer's needs or a request for something a bit different.

The array of tools and equipment in the shop runs from simple hand tools to small power tools like drills, buffers and sanders to larger items like a band saw, a metal lathe and an impressive "Supermax" milling machine. Said Matt, "This tool allows me to design and create nearly anything. Although it's semi-automated, most of the work on it is done by hand." Other equipment includes a slip roller and a brake. These are used to shape and bend sheet metal, such as copper, brass or tin. They use sheet metal to create several different types

of lamps, lanterns and chandeliers, among other things. Their lighting devices are made in several different styles and sizes.

The completed pieces are finished in a number of ways. For instance, they might use a clear coating, a bright finish or paint, depending upon the customer's request. The final coat gets a spray finish, whether paint or lacquer, in a special area of the shop. The lacquer may be clear. Or, if something has to be matched or a special tone is desired, tinting can be added to the finish. Said Matt, "We can finish to nearly any look. We can match any patina with tints or chemicals." Other than a certain space for finishing, there are special areas in the shop for soldering, welding, buffing and sanding. They also have a separate section for building molds for casting, as well as for the casting itself.

Most of their business is from word of mouth and repeat customers. "Many of our new customers come to us because we were recommended by one of our clients," said John. "That's where our hard work and attention to detail have paid off." He went on, "We have lots of local customers, as well as people from New York to California and many in between. We also have pieces in the Virgin Islands." Added Matt, "I guess we have customers from all over!"

Asked why Heritage Metalworks has expanded so rapidly in the past few years they've been in business, Matt responded, "We work hard and know what we're doing." John added, "I feel we've had a lot of good fortune. Good fortune often leads to more good fortune." Both men laughed when asked about working together. Said John, "I'm not sure I'd set out to do it again. But, at this point, I'm glad we're working together." Matt nodded in agreement.

If you have a special metalwork need, such as restoration or a reproduction of something, or want to see some of their original creations, stop by Heritage Metalworks at 2530 Creek Road in Downingtown, PA or call 610-518-3999. ♦

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