

# Door Hardware

BY GREGORY LEFEVER

**D**oors are so commonplace we rarely give them a second thought. Yet they not only provide essential egress for shelter and commerce, they are also key indicators of period and place.

Doors—as much as utensils, roof pitches, decorative color, and window treatments—are emblematic of specific eras, which is why a door's particular style and hardware are so important to restorers, archaeologists, architects, historians, home decorators, even movie-set designers.

Whether you're a museum conservator replicating a bygone building or a homeowner seeking a distinctive early ambiance, two factors must be considered: the style of door and the hardware—hinges, latches, pulls, and locks. Museum conservators limited to a specific period and traditional techniques have a clear choice. For the home decorator, the matter is more complicated. Even after the door's hardware style is identified—say, a strap hinge with a face-pintle mounting for the front door—there's still the question of production authenticity. Do you run over to Lowe's to pick out something from the mass-produced samples? Or do you give a skilled blacksmith the specifications, wait a month while he crafts a beautiful, one-of-a-kind, period hinge, and pay accordingly for his time? Ultimately, it comes down to matters of personal preference, waiting time, and, inevitably, money.

## THE EVOLVING DOOR

While door hardware has evolved, its



The Dutch door, top, with simple strap hinges and rim lock is the front entrance of an 1819 silversmith's home and shop at Old Salem in North Carolina. Below is the night latch on the house's back door, which was not fitted with a rim lock. The Moravians who settled Salem tended to simplify their hardware over time. Courtesy of Old Salem Museums.

basic function has remained the same. You need something to support the door and allow it to open and close: the hinge. You need something to grab for opening and closing: the handle or latch. You need something on an exterior door to secure it from unwanted intrusion: a lock. Each has changed considerably in America from the early 1600s through the 1900s.

At Plimoth Plantation in Massachusetts, resident blacksmith Mark Atchison produces by hand much of the hardware used at the early-seventeenth-century site and has contributed hardware to other living history museums and restorations. "We find the door styles bleeding over from the medieval period well into the eighteenth century, though the functions and styles actually didn't change very quickly," Atchison says.

"When you look at the doors, there was a very distinct difference between the interior and the exterior doors in terms of hinges and latches," he con-



tinues. "The exterior door more commonly has the strap hinge, while the H-style hinge was more prevalent on interior doors. You also see large butterfly hinges on some interior doors, but they were less common."

The latch, predecessor of the door-knob, is frequently misrepresented on colonial doors. "One of the distinctive features of our period is that the doors did not generally have thumb-latches," Atchison says. "More often we see a large, pear-shaped ring on the outside of the door, attached to a bolt on the inside, so when you pivot the ring, it lifts the bolt and allows the door to open. I don't believe thumb-latches were unknown in the first quarter of the seventeenth century, but they were not as common as the pear ring."

Door locks are particularly distinctive to their time. Locks found on



Another house at Old Salem has an imported English rim lock on an interior door. Courtesy of Old Salem Museums.

LEFT:

This 17th-century thumb-latch is an elegant contrast to the large pear-ring latch that would have appeared on an exterior door. Courtesy of Plimoth Plantation.



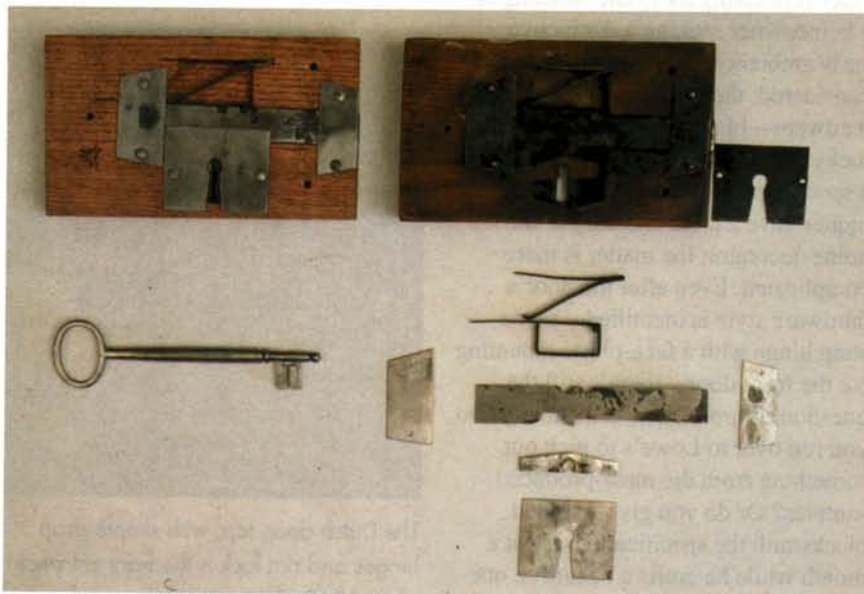
houses of the 1600s tended to be of wood, their strength dependent on their size. The common stock lock consisted of a box containing a latch mechanism operated by a key. It was attached to the door, not embedded in it. "The stock lock was mounted into a wooden body, which was actually considered more weather-resistant than locks made of iron—which would rust—and they were cheaper," Atchison notes. "It was a pretty slow evolution of locks from the early seventeenth into the eighteenth century. The most common locks in the seventeenth century were relatively simple and they certainly weren't masterful pieces

of protection. They could be easily picked and they tended to keep only the honest people out."

So how did the Pilgrims protect their homes? Bolts—big wooden or iron sliding bolts on the inside of doors. "They frequently had bolts, top or bottom or both, to keep out intruders," Atchison says. "If you look at the typical front door of our period, the hinges would be on the inside—usually a strap hinge with the strap tapered and having a leaf-shaped finial—and the door would have a lock and a latch, and the latch would be a ring latch. And you'd find a bolt or bolts on the inside of the door."

Each of these early colonial hardware pieces changed as manufacturing methods advanced. C.R. Jones, conservator at the New York State Historical Association in Cooperstown, which operates the Farmers' Museum and Fenimore Art Museum, explains that door hardware in upstate New York, as with many other parts of the east and central United States, clearly evolved through the eighteenth and nineteenth centuries.

"Through the late 1700s the hardware is handmade, in wrought iron," he says. "There were also hardware



Examples of wooden stock locks from Plimoth Plantation show how the latch mechanism was attached to the face of the wooden door instead of being embedded in it. The lock mechanism was then enclosed in a wooden box, which was considered more weather-resistant than iron. Courtesy of Plimoth Plantation.



imports from England, many of them considerably more refined than the village blacksmith was able to make. English factory-made items became more prevalent in the 1810 to 1830 period. And by the 1840s, even more sophisticated hardware was appearing, including the brass box locks. Heading into the 1850s, the butt hinge becomes more common and we start seeing the factory-produced mortise lock, which is embedded right in the door."

In the same period, the latch yields to the doorknob. Jones says doorknobs are evident in the early to mid-1800s, made of white or brown porcelain, brass, glass, or even decorated wood. New American factories began producing hardware in quantities sufficient to reduce dependence on English imports. "By the 1850s, companies here are cranking out large quantities of hardware," Jones notes. "You find many more elegant items, and what you selected was mostly a matter of cost and what you wanted it to look like."

Overall, fixtures from the colonial through the Victorian period became increasingly ornate, but there were exceptions. Nat Norwood, director of historic trades with Old Salem Museums, North Carolina, says, "In Salem, we see a shift away from the fancy Moravian style to a much simpler one."

The Moravians, a Protestant Germanic sect who founded settlements in Pennsylvania and North Carolina in the early 1700s, brought with them their distinct styles of door hardware. But, Norwood says, the Moravian style eventually was diffused as the sect assimilated into the larger community. "If you look at the strap hinges, as an example, you see they get simpler, without the molding or beveling that shows up in the earlier pieces. The dictates of the market led to simplification of the furniture, a moving away from the more ornate Germanic appearance to one that's more tied to American Southern vernacular."

William Flynt, architectural conservator at Historic Deerfield in Massachusetts, notes that hardware from different periods can show up in a particular historic home. The fourteen historic houses at Historic Deerfield date from about 1730 to the late nine-

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teenth century and demonstrate a distinct evolution of door styles and hardware from house to house.

"You could have an eighteenth-century house that somebody buys in the 1860s and remodels as a Federal, but maybe in the back part of the house the original hardware—maybe a brass Suffolk latch—is still intact," Flynt says. "You can find a mix of the older hardware because, after all, they scavenged hardware, too."

An excellent way to achieve historical accuracy is to visit living history sites that match the period you want to portray. Then, once you know what hardware meets your specifications, the next step is obtaining it.

### TALKING TO THE SMITHS

As with other types of purchases, when buying period hardware you usually get what you pay for. The price understandably increases commensurate with the amount of hand-labor involved and the attention to historical accuracy.

#### Kevin P. Clancy

If you match today's working blacksmiths to time periods, you'll put purist Kevin Clancy solidly in the early period. The Eldersburg, Maryland, blacksmith has been at his coal-fueled forge with anvil and hammer—no modern tools whatsoever—for nearly two decades, producing some of America's finest hand-wrought hardware for restored and replicated homes, as well as for museums such as Mount Vernon and Jamestown in Virginia and St. Mary's City in Maryland.

"I do it entirely the traditional way," Clancy says. "To achieve the look and authenticity I'm after takes attention to detail in both the method of manufacture and the finished product. That's the only way to produce pieces that truly capture the look and feel of the early originals."

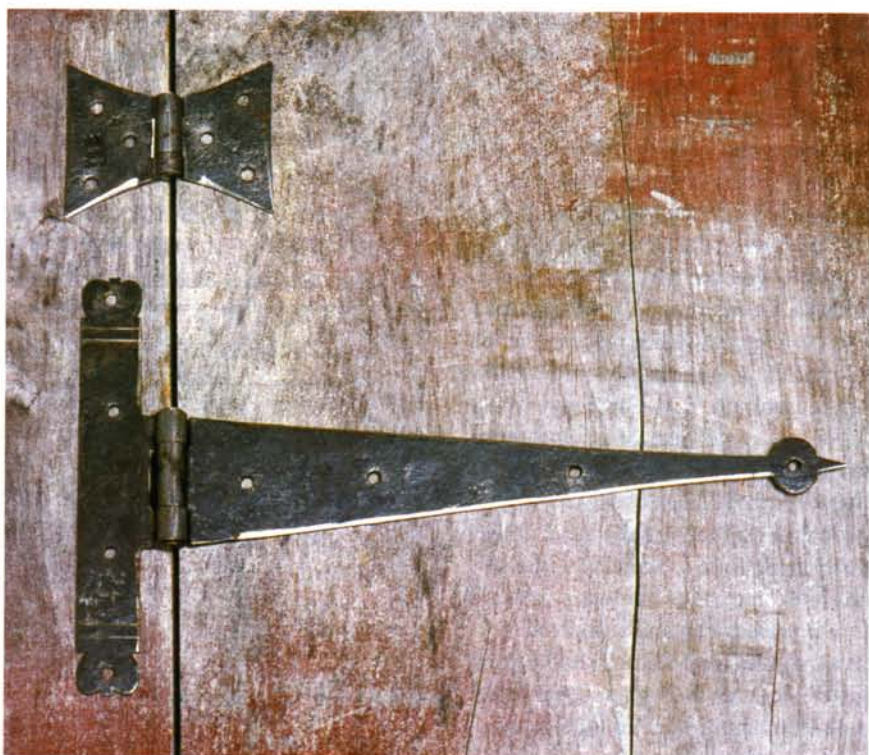
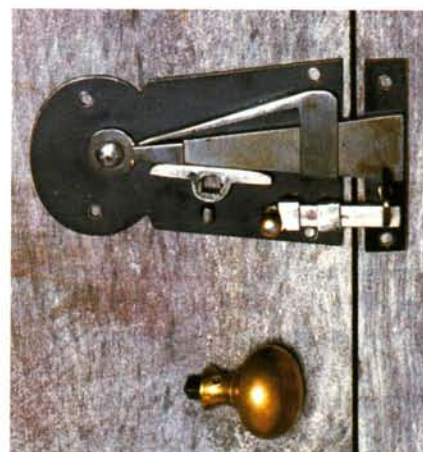
Clancy evolved into his labor-intensive form of blacksmithing after working as a woodworker specializing in restorations. He became interested in making locks and hinges, he says. "And then I bought an old house that needed hardware, so I decided to jump right into it."

Clancy focuses on replicating items



Blacksmith Kevin Clancy specializes in early locks, like the wrought-iron box lock with handmade steel key from the early 19th-century, above, and a keyhole-shaped spring latch with brass knob, also early 19th century. Below, the dovetail or butterfly hinge and the cross-garnet hinge with foliate ends are 18th-century reproductions.

PHOTOGRAPHS BY WINFIELD ROSS

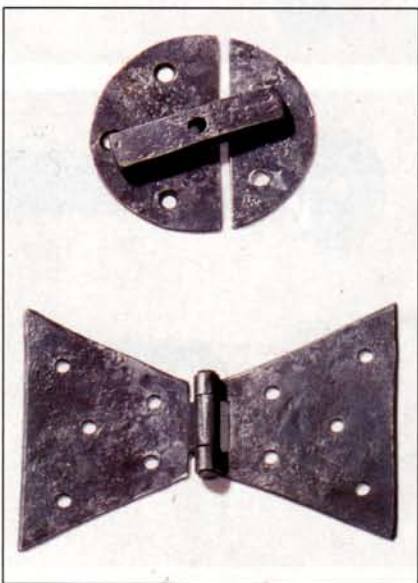




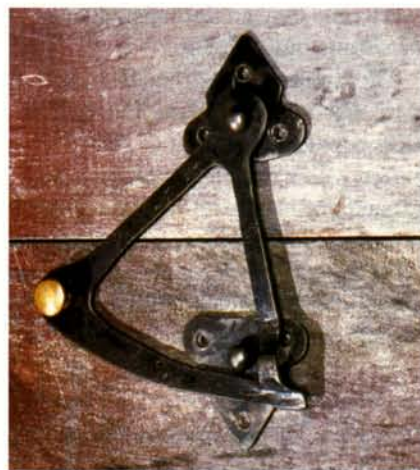
from the seventeenth through early-nineteenth centuries. Although he produces an array of hinges, thumb-latches, bolts, and shutter hardware, he specializes in early locks. Because his products are hand-wrought and historically accurate, a wrought-iron lock can cost \$1,800 to \$2,200 and is a thing of intricate beauty. His hand-crafted thumb-latches will run about \$150, as will a sliding cane bolt, which is in the mid-range for traditionally made hardware.

Word-of-mouth is his strongest marketing device, especially among architects and museum people who have viewed his products in living-history settings. "Everything I do is specially made to order," he explains. "Almost everyone who calls me has something specific they want at a particular size." He can forge some items in about a month, but locks can take up to three months because of the complex inner workings, for which he also does the brass castings.

Clancy strives hard to match the quality of hardware of his colonial counterparts. "In the eighteenth and nineteenth centuries, much of the hardware in America was imported from England, where it was mass-produced in small shops, the cottage industries," he explains. "The blacksmith would make the same thing—say a cross-garnet hinge—over and



Blacksmith Franklin Horsley of the Old Smithy Shop makes a variety of early hardware. The exterior throated thumb-latch with thumb piece has the common bean design, the most popular during the colonial period. Below are a turn-knob cabinet latch and butterfly hinge and a ball-and-spear strap hinge. The quadrant is used to anchor the upper and lower sections of a Dutch door.



over again, seven days a week, week after week. They were skilled at making this one thing, so what I try to do is achieve that same appearance and level of quality for a number of different items."

He particularly enjoys reproducing Pennsylvania German hardware. "On one hand it was cruder than some of the imported items, but it also was more freehand and much more expressive."

### Old Smithy Shop

Another source of quality colonial-period hardware is Franklin Horsley at

Old Smithy Shop in Brookline, New Hampshire. He, like Clancy, relies on traditional blacksmithing methods, though not exclusively. When it makes economic and artistic sense, Horsley uses a drill press, band saw, or grinder, but refrains from more serious deviations such as modern forges and power hammers.

Horsley's hardware is patterned after pieces prevalent in the more sophisticated areas of America, dating to the seventeenth and eighteenth centuries. During this period, iron was imported from England at significant

costs, and the resulting hardware was characterized by thin, fine features and a pronounced elegance of line.

Old Smithy specializes in handles and hinges. "I'm in what is known as the Connecticut style," Horsley explains, "which is a finer, more delicate style, and my forte is colonial hardware. That's what I do."

And he does it well. He is known as a New England master blacksmith, and his hand-wrought hardware has been featured in a Metropolitan Museum of Art display of an authentic colonial room, as well as at the



Wadsworth House at Harvard University, the Franklin Pierce Presidential Home in New Hampshire, and other notable historic sites. He began blacksmithing in the 1970s when his family moved to a home in Milford, New Hampshire, and discovered an old blacksmith shop in the barn.

His target customers are people doing pristine home restorations. "Most have older homes and want to keep them as authentic as possible. They tend to be high-end, they hire the best carpenters, and they want the correct hardware."

"My mainstay is the latches," he continues, "especially the bean handle and the heart handle. They seem to be popular because people like the way a house can talk to them. And a particular style of handle set—which they use every time they go through a door—says something to them."

Old Smithy Shop offers its hardware with a choice of four finishes: the most popular forge finish—gently buffed with a clear matte lacquer; a painted finish; a textured finish with an accentuated hammered surface; and an oil finish with black oil burned into the iron during forging. The last is also popular but more time-consuming.

Because of the amount of handwork in Old Smithy hardware, prices are higher than for mass-produced pieces, yet competitive with other hand-wrought items. A throated Suffolk latch in bean, heart, or tulip style costs about \$395 for an exterior latch, \$295 for an interior one. A plain Suffolk door pull is about \$195.

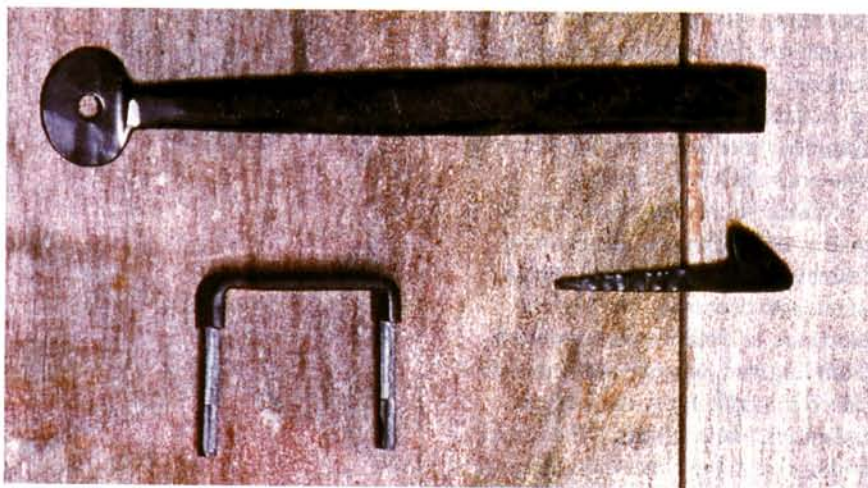
Much of Horsley's business comes from custom orders, and turnaround is generally two to three weeks, though somewhat longer for more elaborate orders. He does, however, have a standing inventory on some items. "I have a moderate stock of my basic items simply because I like the process of making them," he says. "I like repetitive things like hammering the pieces. I find it relaxing and satisfying to the soul."

## Iron Apple Forge

Joseph Beck at Iron Apple Forge in Buckingham, Pennsylvania, is not a purist in either hardware styles or pro-



At Iron Apple Forge, blacksmith Joseph Beck produces several hand-forged items, including the small heart hook and small twisted J hook at left. The bean thumb-latch, bottom, can be made for either interior or exterior doors; additional parts for the latch, center, are a drop bar, drive catch, and drive staple.



duction methods, but over the course of three decades he has become one of Pennsylvania's premier artist-blacksmiths.

Beck produces a number of hinges, latches, knockers, and bolts in authentic colonial style. He uses his own designs or draws on traditional forms for kitchen, bathroom, patio, and garden items. His work is installed in museums, businesses, government buildings, and homes around the country. He also provided several period-authentic hardware pieces for the set of Mel Gibson's Revolutionary-era movie *The Patriot*, to which the Smithsonian gave the stamp of historical authenticity.

Beck approaches his blacksmithing with an artist's eye. "My style is to have the things hammered out more smoothly than the more primitive





look, I'd say I admire the style of the old European blacksmiths the most. I like the long tapers and the curled leaves of their more refined work. I try to use the best of their techniques whenever I can."

Those are provocative words from a man who first turned to blacksmithing because it was more interesting than shoeing horses. Thirty-some years ago he was interested in the horse business in his native Bucks County, learned horseshoeing, and did it for seven years. Being in an old part of the country, he studied its early hardware and was influenced by an uncle skilled in restoration and historic reproduction.

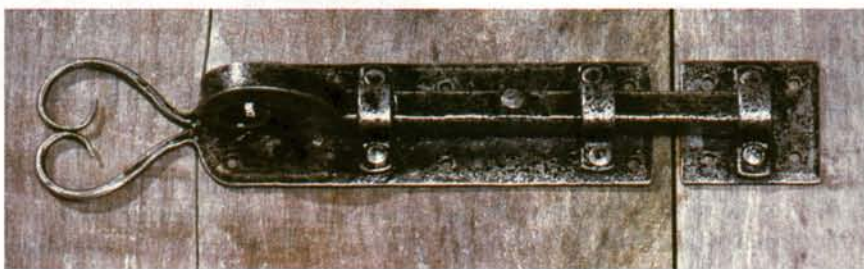
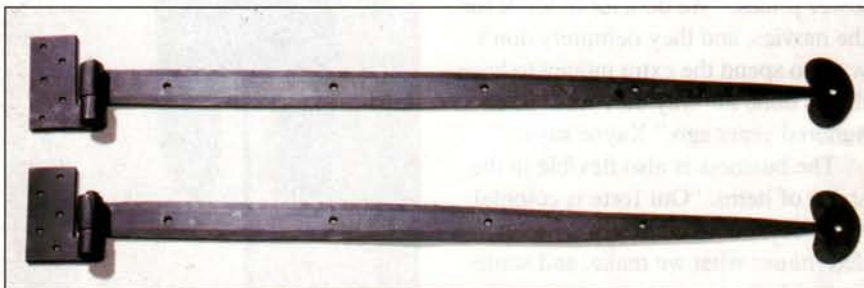
"The basic forge work I learned making horseshoes opened a door for me," he recalls. "Of course the early years were pretty slim pickings. My junk pile was pretty deep." But Beck hit his stride and, through a combination of replicating early hardware and designing his own pieces, established Iron Apple Forge with his wife. "She's in the retail part, where she manages the modern end of the business with the computers and such," he says, "and I like it here in the shop with the two-hundred-year-old technology."

His shop is outfitted with both coal and gas forges. "I'm not such a purist that I won't use an electric arc weld when it won't jeopardize the look of the piece," Beck explains. "When you look at production from an economic standpoint, sometimes producing a piece the traditional way means the price is going to be prohibitive for some people. If I can get the look I want and keep the price lower, that's what I'll do. That's why the shop here has some machines—it's a mixture of them, all outdated by today's standards—but they're useful for certain things, especially for the basic cutting, which I can do much more quickly with hydraulic shears than by using a hammer and chisel."

Beck's prices reflect his emphasis on efficient production. His thumb-latches run about \$60 for an interior-door latch and \$100 for an exterior door. H-hinges are \$25 to \$95, depending on size, and strap hinges run about \$95 a pair. "I hear my prices



Kayne & Son specializes in door hinges and thumb-latches. Examples are the spear thumb-latch (with drive parts), bean strap hinges with jamb pintles, center, and a Moravian heart slide bolt with regular catch.



are in the mid- to low range, which is where I want them, because I'd rather be busy than price things too high and sit here with nothing to do."

### Kayne & Son

Kayne & Son also combines traditional and modern production methods for increased output and a wide selection of hardware styles, enabling the business to evolve over the course of forty years. Its founder, Steve Kayne, began learning blacksmithing when he was eight and started the business in his Long Island garage in 1965. The Kayne family business moved to Candler, North Carolina, in 1982 and now

operates three forges in a 7,000-square-foot shop.

"People tend to consider blacksmithing to be something that was around only before the Industrial Revolution, but there are people today who still want the hand-forged pieces—something not just stamped out in a factory—where no two pieces are the same," says David Kayne, who began learning the craft from his father at age five.

Kayne & Son specializes in producing period door hardware—mostly hinges and thumb-latches—and fireplace tools. In making them, the company matches production methods with



the nature of the piece being produced.

"In a lot of cases, it just makes more economic sense for the customer to have us do it the way they did one hundred years ago, when things did tend to look the same," David Kayne says, noting that century-old processes involved a fair amount of standardization. "Price is predicated more on the time it takes to produce the item than on the materials. When you're finishing a piece, the old way involved using a file, which would take hours, whereas a grinder or a belt-sander takes just a few minutes." Likewise, a band saw can be used instead of the traditional hacksaw, and a motorized tumbler can replace the traditional wire brush.

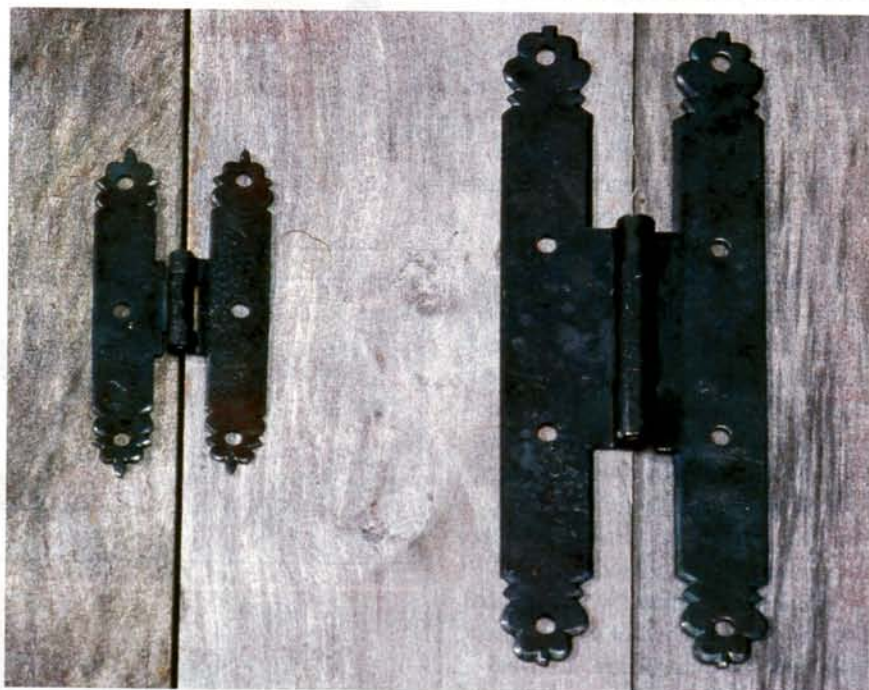
Done with skill, using modern tools and methods does not mean significant sacrifices in appearance but can result in dramatic time savings, which means lower prices. "We do a lot of work for the movies, and they definitely don't want to spend the extra money to have things done the way they were three hundred years ago," Kayne says.

The business is also flexible in the styles of items. "Our forte is colonial hardware, but it's the customer who determines what we make, and sometimes it's the more modern pieces," Kayne explains. Today the shop is doing a lot of work in California, not only for the movies, but also for wineries that want a hand-wrought feel to the door and other hardware fixtures adorning the buildings."

Kayne said about 60 percent of the business still remains in colonial-period homes and replications. "Our customers are people who don't want their hardware to look mass-produced modern."

### Ball and Ball Hardware Reproductions

Ball and Ball Hardware Reproductions in Exton, Pennsylvania, produces handmade and what it calls "semi-handmade" door hardware, which again relates to certain production methods that bear on an item's price. The firm is noted for its broad selection of items—spanning the eighteenth century to the Victorian era—including period lighting, and hardware for furniture, clocks, fireplaces, and sashes and shutters.



For doors specifically, Ball and Ball produces iron H-hinges, strap hinges, bolts, and thumb-latches for exterior doors, as well as iron and brass hinges, bolts, handles, and doorknobs for interior doors. Other offerings include locks, mortise locks, and bolts in many styles, all done by three on-staff blacksmiths.

Ball and Ball was founded in 1932 by brothers William and George Ball and is now run by the third generation, William Ball Jr., grandson of the co-founder. The work is very much in the family blood. In seventeenth-century England, Ball ancestors were appointed armor makers to the crown, while succeeding generations of metalworkers included an earlier William Ball, a silversmith who opened his Philadelphia business in 1752.

The company has an extensive cat-

Products from Ball and Ball Hardware Reproductions include hand-forged iron strap hinges and H hinges with foliate ends. Photos opposite show a Suffolk bean latch with an interior latch bar on plate and an iron slide bolt with bolt keeper.



alog and website, yet it produces everything in-house. "We have a lot of things going on under one small roof," Ball says. Because of its product-line breadth and seven decades in business, Ball and Ball items show up in numerous historic sites, restorations, and replications of buildings, from the colonial to the Victorian, across America. All Ball and Ball designs replicate period pieces.

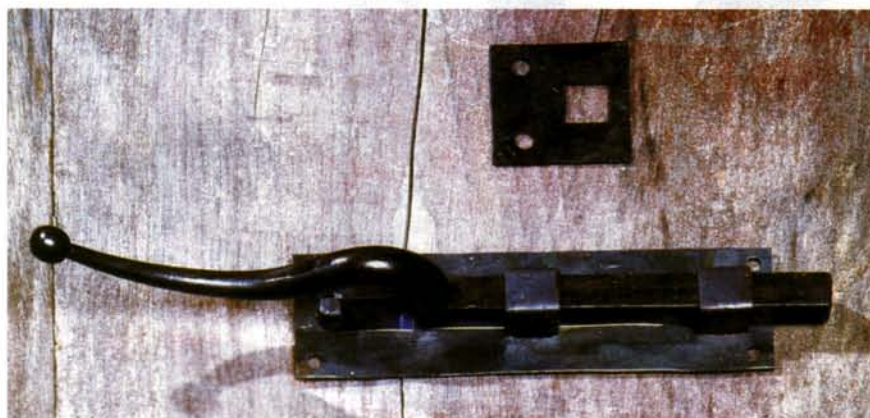
Ball says handmade versus semi-handmade is a distinction that varies from piece to piece. "A lot of people don't want to pay the difference between a piece that's completely hand-forged and one where some other techniques are also used. Semi-handmade means the material might be a little thinner and it might involve a little less hand work, although every piece has some forge work on it. We'll do as much hand-forging as is practical to make the product look like it's supposed to look."

Like the other blacksmiths, Ball finds that everybody wants things a lit-

tle different. "Much of what we do is custom work—they'll see a thumb-latch in our catalog and want it just a little larger or something else just a little bit different—and we have to be able to respond to those requests, which we do."

He said the firm also strives to keep lead times as short as is practical—for most items, three to five weeks. "It's true that we do a lot of custom work, but for a lot of things in our line, we have parts already made, so we can accommodate the custom requests without having to do everything from scratch."

As you've probably figured out, the most important aspect of acquiring hardware from any of these smiths is having a clear idea of what you want. Each is willing to forge something to your exact specifications, which is the biggest difference between the traditional craftsman and the soulless stamping out of shapes from sheets of metal, piece after piece after piece. ★



## SOURCES

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## FURTHER READING

*Early American Wrought Iron*,  
by Albert H. Sonn  
(New York: Random House, 1988)

*The Framed Houses of  
Massachusetts Bay, 1625-1725*,  
by Abbott Cummings  
(Cambridge, Massachusetts:  
Belknap Press, 1982)

*Mechanick Exercises,  
or the Doctrine of Handy-work*,  
by Joseph Moxon  
(Mendham, New Jersey:  
Astragal Press, 1989,  
originally 1687)