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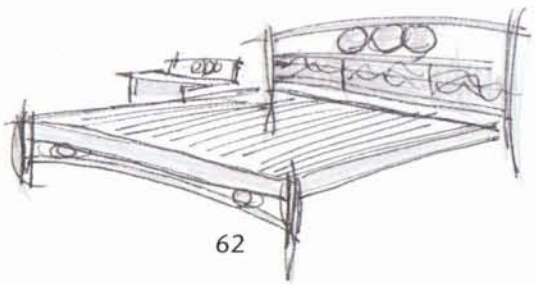

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FEATURES

FURNITURE COLLECTION

On the cover: *This tiger maple chest-on-frame by Ian Ingersoll turns a traditional William and Mary form into something new. See p. 20. Photo by Boyd Hagen.*

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letters

WALKER HAD TANSU DRAWER DESIGN NAILED

Mark Walker was closer than he realized to the proper material for his wooden "tansu nails" ("Wooden Nails for Traditional Tansu," *HF* #9, January 1997, p. 84), and was not alone in the mistaken notion that bamboo was the traditional material for that purpose. As explained in the book *Tansu: Traditional Japanese Cabinetry* by Ty and Kiyoko Heineken (Weatherhill, 1981), attempting to plane the bottom of a drawer (or other box) to make the ends of the pegs flush with the surface would be disastrous to the plane iron if the pegs were bamboo. The preferred material, according to these authors, was the wood known in Japanese as "utsugi," or *Deutzia crenata*, a deciduous flowering shrub. Walker does himself a disservice in referring to this method of attachment as "crude." Primitive, maybe, but unless he owns a toothpick-making machine, he probably spent much more time than he would have for a trip to the hardware store for a box of brads! The original tansu-makers only used nails to hold the various metal parts to the wood, and all the traditional nails I have seen had small round heads, not appropriate for attachment of drawer bottoms.

According to the same reference, bamboo pegs were used, however, for aligning edges of pieces of a larger panel such as the tansu back, similar to the way that dowels or biscuits are used when making a tabletop from narrower boards.

—Milford S. Brown, El Cerrito, Calif.

STILL TOO MUCH MODERN?

While I respect your printing of letters both critiquing and complimenting your magazine, I was surprised you chose to print "Too Much Modern, Poorly Juried Furniture" (*HF* #9, January 1997, p. 6).

While Mr. Richardson may feel that modern furniture is "garbage," I beg to differ. I find it refreshing and inspiring that so many craftspersons are not mindlessly following styles decades or centuries old but borrowing from designs of the past and using their own creativity to build modern furniture. Imagine a society that never changed and did not encourage free thinking or creativity.

—Scott R. Carnegie, Downers Grove, Ill.

I noted two Letters-to-the-Editor with two opposite opinions (*HF* #9, p. 6). One wanted more features on contemporary-style furniture, and the other one wants less of them.

I strongly agree with the second letter ... Admittedly, it's a matter of taste, of one person against another, but I'd much rather see an even distribution so as to suit all tastes. I do think we should keep in mind that the traditional styles have lasted through the centuries while the contemporary will soon be forgotten.

—Charles R. Jacobs, Brookhaven, Miss.

Submitting an article. *If you have an interesting story about how you designed a piece of furniture, we'd like to hear about it. Send a letter with photos to Home Furniture Editorial, 63 S. Main St., P.O. Box 5506, Newtown, CT 06470-5506. We pay for articles we publish and return materials we can't use.*

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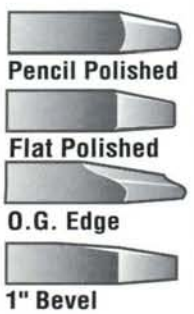

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BY ZACHARY GAULKIN

A Visit to The Wolfsonian in Miami Beach

When someone told me that The Wolfsonian was in a restored "warehouse," I pictured a forlorn building on some seedy back street. I had neglected to consider that the museum sits among the pastels of Miami's South Beach and not, as I had envisioned, in the shadows of the New Jersey Turnpike. In fact, The Wolfsonian's sun-bleached Mediterranean Revival structure looks a lot more like a museum than a former storage facility. But in a way, aren't they sort of the same thing?

It may look dated, but when Gio Ponti designed this steel and aluminum chair in 1938, it was a new idea. Its form has influenced today's office furniture.

The Wolfsonian's collection in Miami Beach spans the years 1885 to 1945.

They are if you're Mitchell Wolfson, Jr., heir to a television and movie theater fortune. Wolfson's warehouse is a massive and elegant attic for his private collection of 70,000 objects made between 1885 and 1945 and culled mostly from America and Europe. When I pushed through the doors to find a reflecting pool below the towering, gold-glazed facade of an Art Deco movie theater, I finally understood how thoroughly I had been misled. This was like no warehouse that I had ever seen.

Wolfson's monumental garret, however, contains more than the souvenirs of a wealthy globetrotter. There is a message in his hoard of "material culture," as The Wolfsonian's curators call it. Every object, including a trove of furniture from high-style to office-supply, is placed in the historical, cultural and political terrain from which it was plucked. The result is a clear and provocative lesson of how the design of everything from toasters to Thonet chairs reflects the world into which it was born.

For the furniture in the collection, this is especially true. From the hand-hewn wooden cabinets of the English Arts and Crafts movement to the sleekness of the Bauhaus, you can see the forces of rapid change through six decades of industrialization ending with World War II. Viewing modern European and American designs through this lens is a mind-opening way to understand and appreciate why our furniture today looks the way that it does.

In this context, for instance, a cabinet with a pastoral inlay of rolling hills and trees made in 1891 by W.R. Lethaby can be appreciated on many levels. It is a wiltingly beautiful piece of craftsmanship, but it is also a transparent example of the reaction against modernization by Arts and Crafts designers in England at the turn of the century. The tubular steel and bent plywood chairs of Marcel Breuer and Alvar Aalto designed decades later can be seen as products of the same modernizing forces, except that these designers have chosen to embrace, rather

One of the strengths of The Wolfsonian is its collection of decorative arts from the British Arts and Crafts movement, such as this 1891 cabinet by W.R. Lethaby, an English architect and teacher.

Top photo: Zachary Gaulkin; other photos: Bruce White, courtesy of The Mitchell Wolfson, Jr. Collection

Propeller table. Objects such as this 1939 table by Archibald Taylor, in which the magazine rack resembles an airplane propeller, illustrate how furniture designers adopted the images of technology.

than to fight, the winds of change.

The Wolfsonian's mission is best articulated in its opening exhibit and accompanying book entitled "Designing Modernity: The Arts of Reform and Persuasion." (This traveling exhibit opened in February at the Carnegie Museum of Art in Pittsburgh.) Displayed alongside a myriad of objects—posters, sculpture and household goods—the furniture shows just how much kinship exists among commercial, industrial and graphic design.

Although this inaugural exhibit has left Wolfson's Miami Beach warehouse, there are still a number of good reasons to go to The Wolfsonian, aside from the balmy weather. The museum boasts the largest assemblage of 20th-century Dutch and Italian decorative arts outside of those two countries. Some of this work can be seen in an ongoing exhibit called "Art and Design in the Modern Age," a continually changing selection from the museum's permanent collection. There is also a research center and library containing 36,000 rare books and periodicals open to the public by appointment. And if that is not impressive enough, you can always visit a branch of The Wolfsonian housed in a reproduction of a medieval castle in Genoa, Italy, which contains Italian sculpture, painting and decorative art from the same period. This too, I assure you, is no warehouse.

Zachary Gaulkin is an associate editor at Home Furniture.

If You Go...

The Wolfsonian, located at 1001 Washington Avenue in Miami Beach, is open Tuesday through Saturday from 11 a.m. to 6 p.m., and Sunday from noon to 5 p.m. The museum is open free of charge from 6 to 9 p.m on Thursdays, and is closed Mondays and major holidays.

Admission for adults is $5; admission for seniors, students, and children age six to 12 is $3.50. For information on upcoming events or for group rates, call (305) 531-1001.

The Wolfsonian's inaugural exhibit, "Designing Modernity: The Arts of Reform and Persuasion," will be at The Carnegie Museum of Art in Pittsburgh until May 18, 1997. The exhibit then travels to the Indianapolis Museum of Art (November 23, 1997 to February 1, 1998) before leaving for Japan, Australia and New Zealand.

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craftsman's corner

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the drawing board

BY PHIL LOWE

Patterns Take the Guesswork Out of Reproducing Antiques

Reproducing antique furniture is a joy, but it's no easy task. By far the most foolproof method of recreating the subtle curves and contours is to find an original and make patterns. Patterns will help you create the full-scale drawings you will need and ultimately can be used for templates when it comes time to build.

Even when I am going to make patterns, I start by sketching three views of the piece—the front, side and top view—to have for future reference. After sketching the piece, I record the overall dimensions using either a tape measure or, better yet, by transferring points to a pine story stick. The story stick will give you an accurate reference for making full-size drawings without having to measure dimensions. I then measure the thickness of various parts with a ruler or plastic-tipped calipers and record them on my sketch.

With the basic measuring done, it's time to tackle the more difficult curved elements, such as the shape of a chair leg or the pattern of a back splat. The easiest way to do this is by tracing them. When the element is fairly flat, I like to trace it onto a piece of ⅛-inch birch plywood. Plywood, however, may be too stiff to conform to parts with extreme or compound curves, such as a chair splat or crest rail, so I always have more flexible cardboard or matte board close at hand.

To start the pattern, I use spring clamps to keep the tracing material in position, and I hold the shaved part of *a pencil* against the piece to keep the line as close as possible to the edge I am tracing (see the top photo). After tracing the edge, I mark the positions of intersecting pieces, such as the joint line between a chair splat and crest rail, and note transitions in edge profiles, such as the starting and ending position of a chamfer. The pattern should show not only the shape of the piece but all its details. Take time to record as much as possible and make certain that your notes are directly on the pattern, where they won't be cut away.

Some furniture parts, such as cabriole legs or chair arms, are difficult to trace because you will not be able to place the tracing material flush against the part. In these situations, I use a shop-made scribing tool. I make

Making patterns is easy. The best way to reproduce curved shapes is to trace them. To copy the splat on this Queen Anne chair, the author clamped cardboard to it and traced it with a pencil.

A shop-made scribing tool is more accurate than a pencil, especially when a part has a chamfered edge or molding. The tapered edge of the block, which holds a sharp pencil lead, rides along the surface you want to trace.

this tool by taping a chisel-sharp lead from a mechanical pencil to the tapered edge of a block of wood. The narrow edge of the tool rides along the outermost edge of the part, perpendicular to the curve you wish to trace (see the bottom photo on p. 16). By tracing this way, rather than using a pencil and trying to project lines by eye, you can precisely render almost any profile.

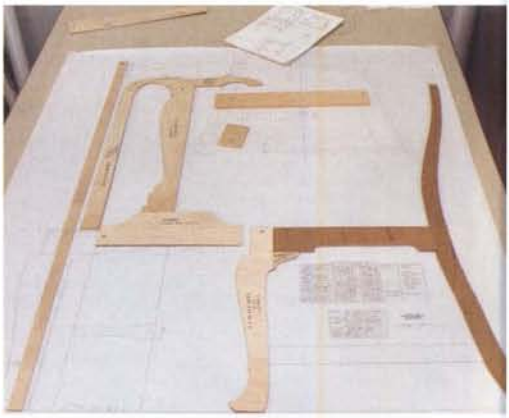
Turned parts require more work to make accurate patterns. The first step in recreating a turned part is to transfer all the clearly defined divisions of the turning to a story stick. I place the story stick against the turning (a stretcher, for example), marking the length and any square sections. Then I project lines from the turning to the story stick where each turned element begins and ends, such as the beginning and end of a cove or bead (see the photo at right). If necessary, I use a square to project lines from the turning to the story stick. After marking off each element, I square the lines across the face of the story stick and use my calipers to measure the diameters of the turning at each point along the stick. I also write the diameter directly on the stick for reference later when I am turning the part on the lathe (see the lower left photo). This method will give you all the diameters, but you will have to interpret, by eye, the exact shape of the curves in between.

With patterns in hand, you are ready to take them to your drafting table and use them as templates for full-scale, measured drawings.

Phil Lowe builds furniture and gives summer workshops in Beverly, Massachusetts. He has just completed a Fine Woodworking *video* Measuring Furniture for Reproduction *(55 min., $19.95). To order, call (800) 888-8286.*

Use a story stick for turnings. Turned parts, such as this chair stretcher, are difficult to trace. Instead, the author transfers each element of the turning to a story stick.

Plastic-tipped calipers measure the diameter of the turning at each point recorded on the story stick. The curves between the points are drawn by eye.



Patterns yield full-scale drawings. After each part is traced and cut out, the author uses them to create full-scale drawings. The plywood patterns also can be used as cutting templates.

craftsman's corner

A Shaker and a Mover

Success with Shaker furniture allows Ian Ingersoll to throw a curve or two into his new designs

BY JEFFERSON KOLLE

A small shop along the river. Ian Ingersoll Cabinetmakers has been doing business for twenty years next to the covered bridge in West Cornwall, Connecticut.

Vietnam behind him, GI bill in hand, Ian Ingersoll went down to Yale University to talk to the admissions department about studying architecture. When the counselor asked why he wanted to study architecture, Ian said, "Because I want to build houses."

"So why don't you go build houses?" the counselor asked.

That question, posed in the early seventies, was the beginning and end of Ingersoll's formal education. He went back to West Cornwall, Connecticut, in the northwest corner of the state and learned to build houses. From handmade houses, handmade furniture seemed like a natural step.

"Here I was in this great hub of furniture making," he said. "To the south of me was the colonial tradition of Connecticut River Valley furniture makers, and to the north, in New Lebanon, New York, were the Shakers." Choosing between the two styles was the question. "At the time I was actively seeking a style. I was looking for inspiration to build on."

Ingersoll has been making furniture in West Cornwall for twenty years now. Word of mouth has talked up his furniture and enabled him to grow his business. His showroom and shop occupy two buildings on the banks of the Housatonic river. He is very proud of the fact that his company, Ian Ingersoll Cabinetmakers, supports ten families.

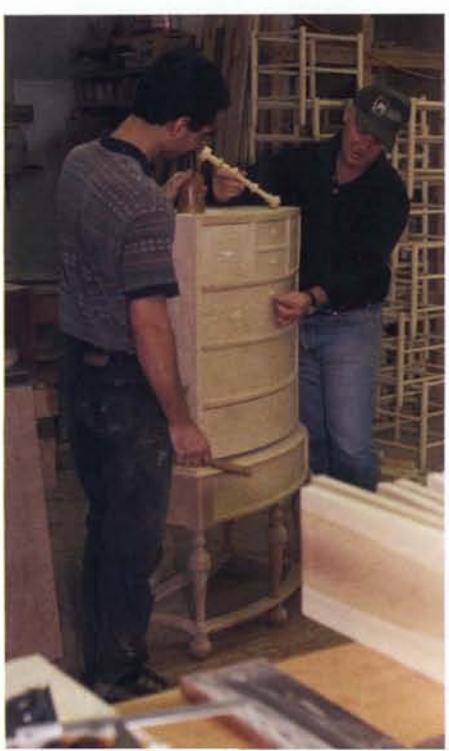
TEARING PAGES OUT OF MAGAZINES

When he was moving from building houses to building furniture, a friend who was a flight attendant gave him a stack of Scandinavian home magazines she had picked up in Europe. Ingersoll started tearing out pages from the magazines of furniture he liked. He soon realized that the photos he was clipping showed furniture with clean, unadorned lines similar to some of the Shaker pieces he admired. "The lack of ornamentation transcended fashion," he said. "There was a delicate balance between comfort and style."

Ingersoll knew he needed to learn more about the furniture, so he taught himself how to weave the tape on Shaker chairs. Then he went to the antiques dealers in the area and told them he would weave new seats for free. Weaving the seats and backs of the Shaker chairs gave him access to furniture he might not otherwise have. He studied the chairs, lived with them, sat in them and ultimately made drawings of the ones he thought were the best of the best.

Ingersoll built some exact copies of a chair made by Robert Wagan, a 19th-

Photos: Boyd Hagen, except where noted; top photo facing page: Jefferson Kolle



Try this at home. The relaxed, comfortable feel of Ingersoll's showroom (above) helps customers to imagine how a piece of furniture would feel in their own house.

From shop to showroom. Ingersoll and his cabinetmakers build furniture in a shop a short walk down the street from his showroom. A William and Mary-inspired chest-on-frame is one of many pieces from his new line of furniture.

Tried and true along with the new. The prototype of a six-drawer, Chippendale-style chest sits in Ingersoll's showroom along with his Shaker furniture. Working daily around a prototype helps him refine his new designs, leading to inevitable changes and improvements.

New designs from the drawing board. Ingersoll's new line of furniture includes a William and Mary jewelry case, a tabletop clock and an end table.

century Shaker from New Lebanon, New York. He started to sell the chairs, and slowly, by building a series of prototypes, he changed the design. After seven prototypes, the Ingersoll chair became the bread and butter of the company. In his best years, Ingersoll sells about 1,000 chairs.

A REALISTIC BUSINESS

From the onset, Ingersoll knew that in order to have a successful furniture business, he would have to sell 100% of the furniture he made. He couldn't afford to make pieces that would languish in his shop because the design was too far out, inaccessible. He admits to being in the right place at the right time. Shaker furniture hit its stride at about the same time Ingersoll did.

And it doesn't hurt that his shop is located in a town where 20% of the population is made up of weekenders coming up to their second homes from New York City. "I always tell my guys that when they start their own business and are thinking of setting up a shop, look for a place where the corner grocery store is filled with Mercedes on weekends." At times, Ingersoll has shipped three truckloads of furniture a week down to New York City.

Ingersoll has no qualms about his role as a businessman. With one child in college and two more waiting in the wings, Ingersoll says, "I can't afford to build something that's not successful."

Looking at his work you realize that the pursuit of craft is very important to him. Looking around his showroom in an 18th-century building on the main street of West Cornwall, the furniture stark and appealing against white plaster walls and oiled pine floors, you can imagine the pieces in your own home. The stuff almost sells itself.

EVOLUTION OF A REPRODUCTION

Ingersoll's furniture designs are not cutting edge or earth-shattering. Matter of fact, he is the first to admit that they are nothing new. Rather, he thinks that in order to be relevant, furniture has to be based in history.

The inspiration for his newest style of furniture, a style he has yet to figure out a name for, came from the 17th century. The tiger maple chest-on-frame (see photo on cover) seems to have a strong William and Mary lineage. But look closer: the drawers are bowfronted and there is a notable absence of a cornice. And those legs—William and Mary would be shocked—have a distinct contemporary flair.

"I started by building an exact replica of the original," Ingersoll said. He kept the replica in his showroom for a long time, right behind his desk where he draws and does his paper work. "I lived with the piece for a couple of months. I'm here more than I'm at home." The piece went through "four or five prototypes." The legs changed, as did the feet. The case got a bowfront, and most importantly, the piece got smaller.

The original is over six feet tall, but the current version is less than five feet. The pulls are made of a tagua nut escutcheon and a silver drop pendant. Ingersoll thinks of the evolution of the piece as being akin to someone who moves from the country into the city. "They've been recoiffed," he said. "Got a short haircut, got refined a little bit. But you can still see the heritage."

Other pieces in the line include a table clock with a compartment in the back for a cognac bottle and snifters (bottom photo, facing page), and a bowfront, cornice-less Chippendale-inspired tall chest with pulls made of white acrylic escutcheons and silver bails (top photo, facing page). In the drawing stage is an Ingersoll version of a bombé chest.

COPY AND BE COPIED

Some cabinetmakers hold their furniture designs and their techniques for building the designs close to their chest, guarding them like top secrets. Ingersoll has a different point of view. He has gotten his inspiration from designs from the past and knows that it is likely someone will copy his designs. And, in fact, it's already happened. He has sold prototypes to Japanese and Italian companies, knowing full well the companies would produce their own furniture from his designs.

His attitudes toward the people who work with him are equally realistic. Many of the people who apprenticed in his shop have gone on to start their own companies. He said that all he can expect of someone is to do the best they can when they work for him. Although he has employees who have worked with him for over a decade, "Three to four years is the average."

And the employees can set their own hours. The Housatonic river alongside his shop is a renowned trout stream, and Ingersoll has had employees who would take off from work when they saw fish rising in the currents.

CUSTOMER SERVICE IS THE BEST ADVERTISEMENT

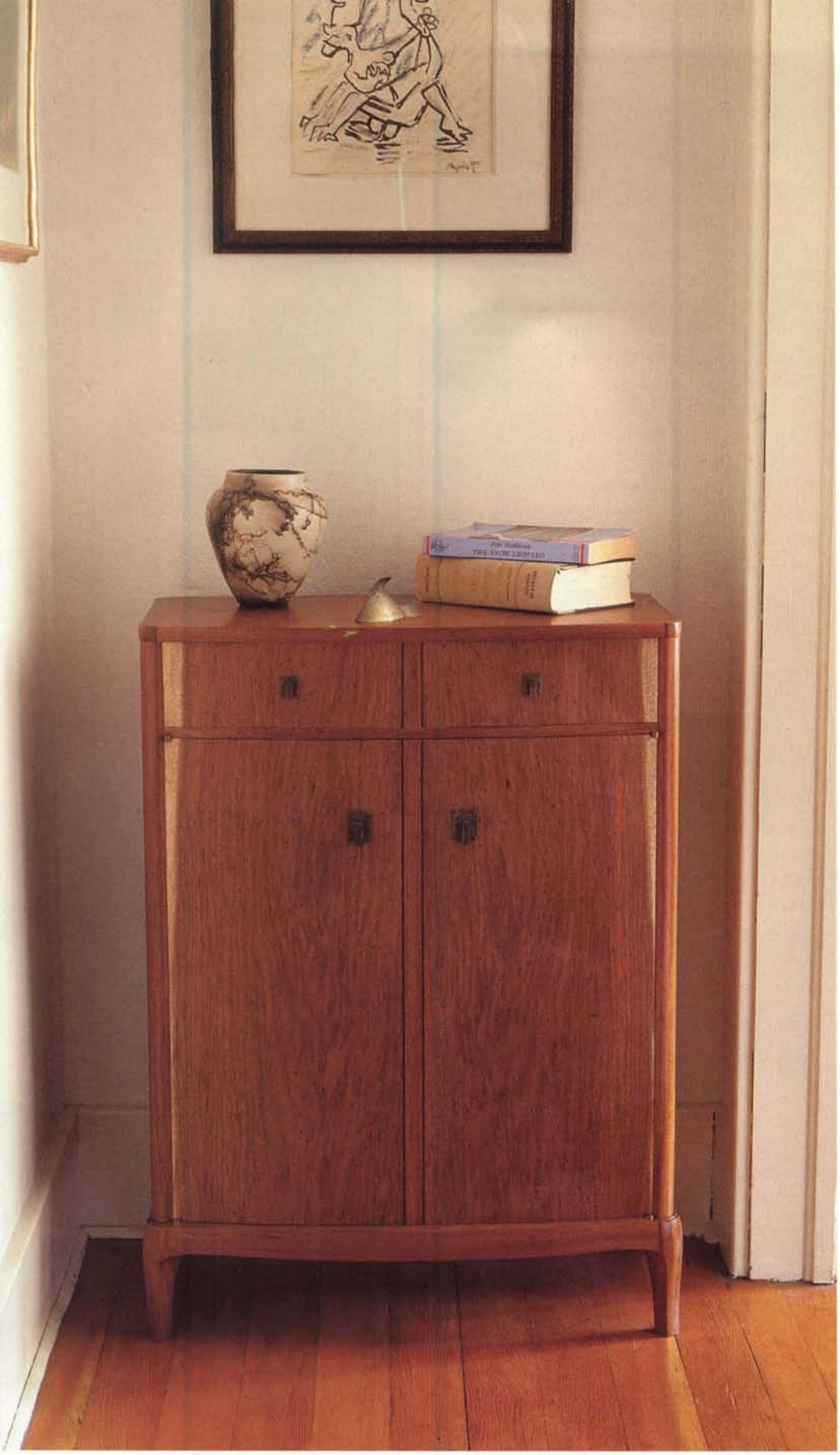
Aside from a couple of advertisements in a local newspaper, Ingersoll hasn't advertised his business. "I put the money others might use for advertising into customer service. If someone buys a chest and the drawers stick the first heating season, I'll drop what I'm doing and go fix the piece." It's paid off. Customers return to buy more furniture, and they tell their friends about the small shop along the river.

Ten years ago, an accident cost Ingersoll the tips of several fingers. He spent a long time in bed recuperating. "It was real painful," he said. "I wondered if I wanted to continue doing something where there was a real danger of losing body parts." In the end, it was the love of the work that made him continue. ■

Jefferson Kolle is an associate editor at Home Furniture.

Shaker bread and butter. After seven prototypes, Ingersoll arrived at the design for his Shaker chair. For years, the chair has been his best seller; its sale and the sale of other Shaker-style furniture, like this chest of drawers (above), has afforded him the luxury of experimenting with new designs.

Top photo this page: Jefferson Kolle



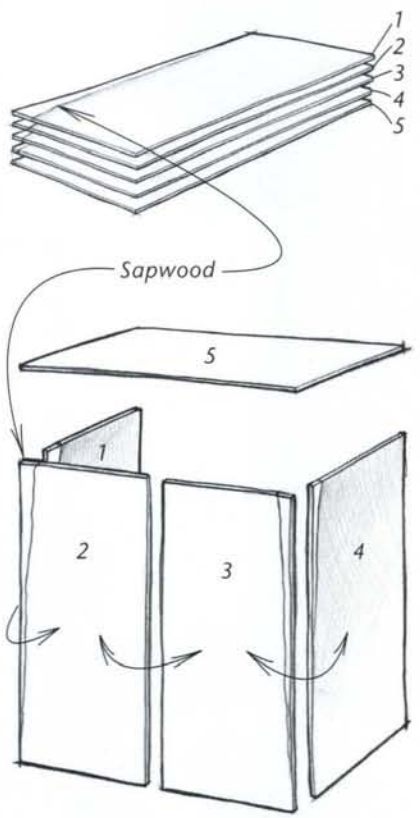
Two planks wide, one plank deep. The pleasing proportions of Smith's cabinet are partly due to his materials: he cut all the kwila veneer from a single plank and used the sheets full width.

Side Cabinet the Size of a Plank

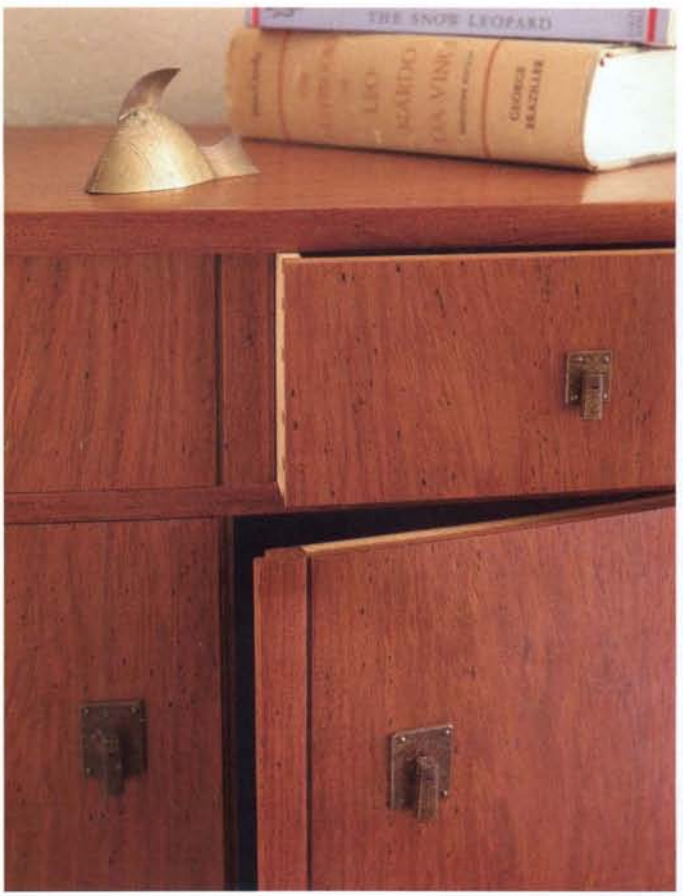
BY GREG B. SMITH

A number of people have told me they like the proportions of this cabinet. I like them too, but I can't take complete credit for them. To a certain extent I let a great plank of kwila influence the cabinet's final dimensions. The board had wonderful deep brown color across most of its width and a flare of bright white sapwood along one edge. When I saw the plank I knew immediately that I'd like to slice it up into veneers that were as wide as the plank and build something that used the veneers bookmatched. I saw the cabinet as two veneer widths wide and one veneer width

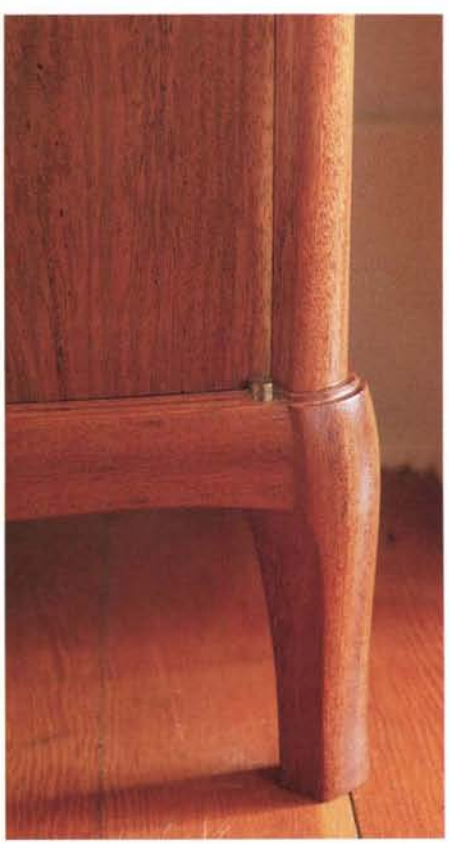
A TRIPLE BOOK-MATCH



To achieve symmetry and a feeling of unity in the cabinet, veneers cut from a plank are arranged sequentially around it. This way the front veneers are book-matched to each other but also to the adjacent sides.



Swinging stile. A strip of solid kwila glued to the right hand door mimics a *medial stile* when the door is closed and completes the vertical line of the drawer divider.



Not quite cabriole. By orienting the leg at a 45° angle, Smith created the effect of a cabriole leg's compound curve without the complex shaping.

deep. If I'd had a choice, I probably would have made the piece wider and a little deeper. I'm glad I didn't.

The cabinet's doors and drawers are faced with a book-matched pair of veneers with the sapwood streak to the outside. People have said it looks like you have walked up to a tree with sun shining from behind it. The sapwood seemed like light to me, too; I had thought of it as emanating from inside the cabinet. To enhance that effect, I veneered the cabinet's interior with very blond maple—a nice surprise when you open the doors. ■

SPECIFICATIONS

DIMENSIONS
25 in. wide, 13 in. deep and 34 *in. high.*

MATERIALS
Kwila, maple and brass.

FINISH
Shellac, Goddard's wax, carnauba wax and beeswax (on the wood); cupric nitrate patina and wax (on the brass).

Photos: Jonathan Binzen; drawing: Bob LaPointe

Old style, fresh spice. James Schriber's pear and figured maple bed respects the traditional pencil post form while reinvigorating it with modern touches.

Resharpening the Pencil Post Bed

BY JAMES SCHRIBER

Take a simple, traditional form, strip it to its bare bones, and then come back with something that's just slightly fresh. That's a typical way of designing for me, and this pencil post bed is an example of the approach. No big splash, simply adding some drama to a form that has inherent potential for drama.

In an original bed of this type the posts would have carried a frame and canopy. Since this bed wouldn't, why not slim down the posts? I stripped the posts down as far as they could go to make the bed as extreme in its pencil postness as possible.

One traditional shape for a pencil post's headboard is a plain panel with a peaked top edge. I took that shape and split it; then the split parts had to be connected somehow. The wedge that I used to do the connecting relates to the peaked shape of the headboard, but also to traditional joinery—the wedges used in a wedged through-tenon. The shape of the button finials at the tops of the pencil posts was an outgrowth of the wedges in the headboard. With these few details I added my own touch to an 18th-century form.

I've made eight or ten of these beds over the last dozen years. The first one was all curly maple. This one in pear and curly maple is the dressiest version I've done. I arrived at the complete design in the first version I made and modified it only in very minor details and in materials in the ensuing versions. The rails, for instance, are tapered across their width so they follow the taper of the legs. The headboard is tapered for the same reason, thinner at the top and thicker at the bottom where the posts are thicker. These may be dumb little things that nobody picks up on, but they are what I spend my time on. ■

Wedged between past and present. The peaked form of the headboard is traditional; the slats and wedges give it a 20th-century twist.

SPECIFICATIONS

DIMENSIONS
84 in. long, 64 in. wide and 80 in. high.

MATERIALS
Pear and curly maple.

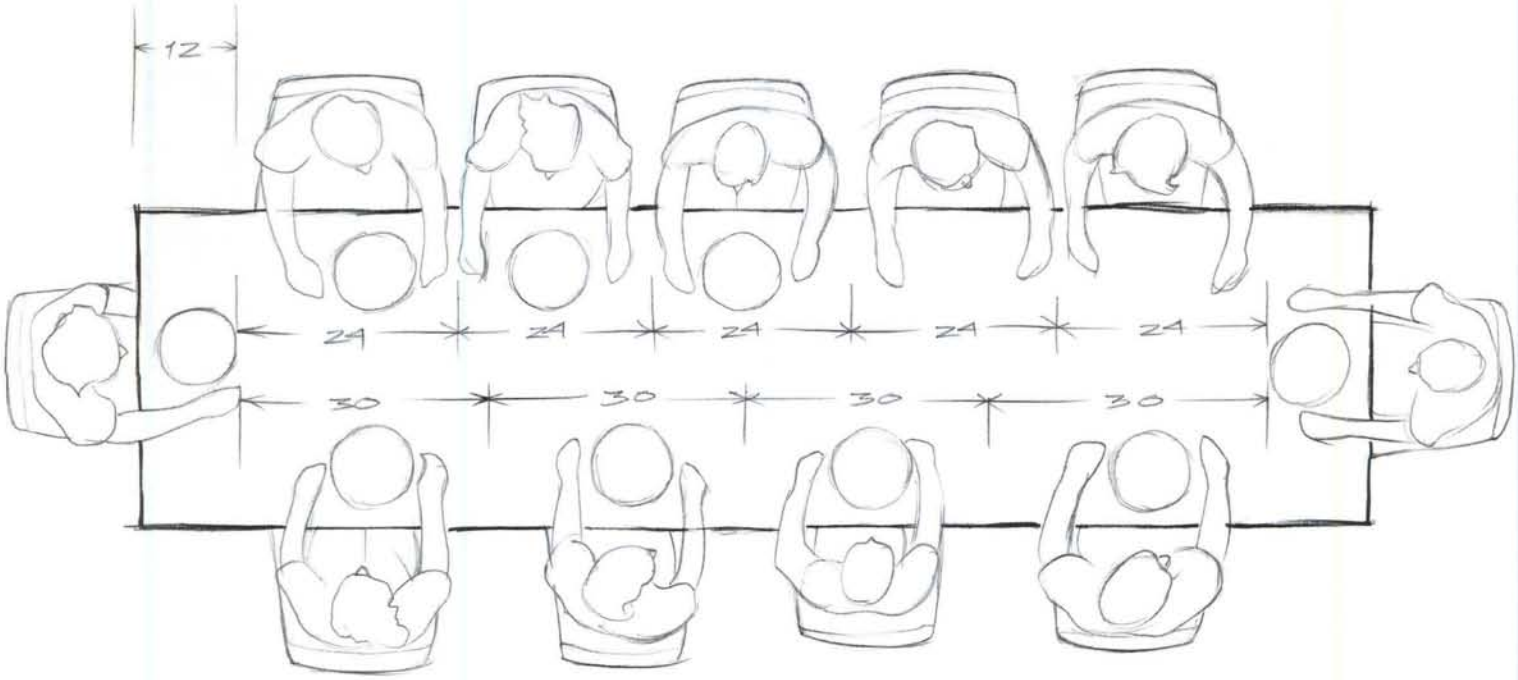
FINISH
Lacquer.

Photos: Jonathan Binzen

Dining Table Design Is Not as Easy as Pie

It's truer than ever before: form follows function

BY CHRIS BECKSVOORT



EATING TOGETHER WITHOUT RUBBING ELBOWS

You can allow a width of 24 inches for each person, but it makes for cramped dining. For more comfortable dining, allow 30 inches. You'll also need at least 12 inches in front of each person. That means adding 24 inches to a table's length if a person is going to sit at each end.

The dining table might just be the most important piece of furniture in our homes. We discuss family matters at it, entertain guests around it, play table games on it, and, of course, we eat at it. It is a homework table, a cook's preparation table, and it is also a family workbench. Yet, its design is often overlooked. Little is written about the form in furniture literature, and the table is frequently taken for granted soon after it is purchased. The dining table gets no respect.

In fact, the only predictably memorable dining table is a bad one. Your guests will remember it if it is too short, too cramped, too small or too big. Put them at a well-designed eating table and the visitors go home happy, but they probably won't remember a thing about the table.

As a designer, I think it is important to accept this rather than fight it. Let your imagination run wild with coffee

tables, but keep it firmly in check when it comes to the dinner table. There's no more appropriate place to remember the age-old directive that form should follow function. The primary function of a dining table is to serve as a comfortable place for people to eat. So, a well-designed dining table must follow certain rules, sizes and conventions. When you sit down to design one, you should ask the same questions as you would when you purchase one. How many people will regularly sit at it? What size table will the room accommodate? What shape top do you like? Should it be a pedestal table, a trestle table or a traditional table with four legs and an apron? How can you get a strong table without making it clunky? How high should it be? There's a lot to consider.

GUESS WHO'S COMING TO DINNER

The first thing you need to consider is the number of people you want to be able to seat at the table. A 3-foot by 4-foot table might sound like the answer for you. But if you entertain large numbers of people regularly in a huge dining room, the size probably won't be appropriate. On the other hand, if you have a family of four, there is almost no point in having a 14-foot long dining table just to make room for a family reunion every other Thanksgiving.

It's a good idea to consider what else you might want to use your dining room table for. Granted, Aunt Thelma and Uncle Roy might stop by for turkey only every second year, but if you like to sit at the table and spread out the Sunday paper, or build a scale model of "Old Ironsides," a bigger table might be right for you.

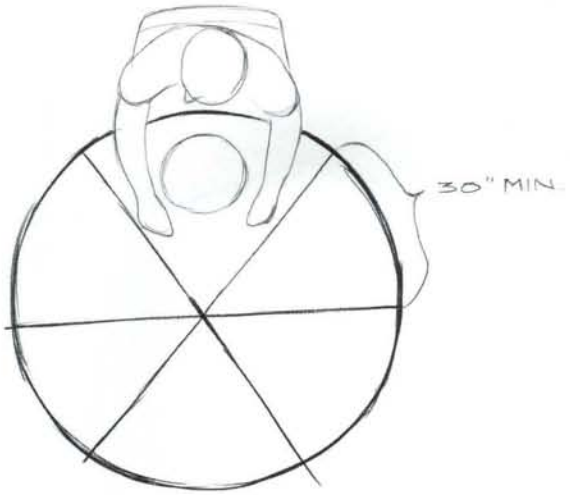
FITTING THE TABLE TO THE ROOM

Another important design consideration is the dimensions of the room where the table will sit. Face it, if your dining room or the area where you want to put your table is 8 feet by 10 feet, there's just no way you are going to fit a table to seat 12 people. People sitting at the table have to be able to get in and out of their chairs comfortably, and if they are jammed into a corner of the room or into a wall, they will feel trapped.

In order for the average person to get up from the table—push his chair back and stand up comfortably—he needs about three feet of floor space from the edge of the table to the back of the chair (see the drawing above). It seems like a lot of space, but it really isn't when you figure that the seats of most chairs, excluding the legs and back,

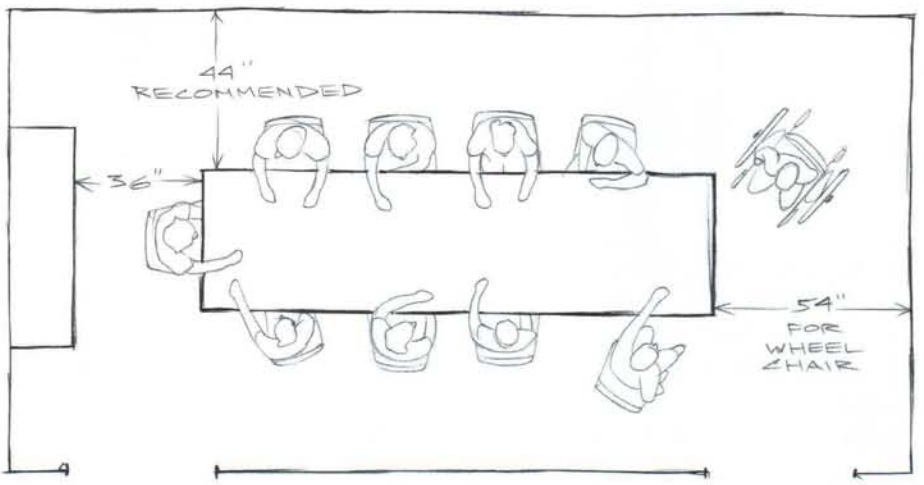
ROUND TABLE DISCUSSION

The spaces at a round table get narrower toward the center, so plan on giving each person 30 inches along the table's edge.



THINK OF THE ROOM, TOO

Average chair-seat depth is 16 inches, so it's not surprising that you have to allow at least 36 inches between table edge and wall for someone to push back their chair and stand up. With 44 inches it is even easier to get out of a chair. For wheelchair access, allow 54 inches.



Drawings: Michael Gellatly

DROP-LEAF *TABLE* SAVES SPACE

Hinged sections of the top fold up, and the legs swing out to support the leaves. Although they are very versatile, drop-leaf tables are not the most stable table design.

are 16 inches deep. The American Institute of Architects says that 36 inches is the minimum distance to push a chair back. The preferred distance is 44 inches, and for wheelchairs, you should allow at least 54 inches.

ONE SIZE FITS ALL, MOST OF THE TIME

As a rule of thumb, it is normal to allow 24 inches of tabletop perimeter per person. That does not mean that you could seat 11 people at a 3-foot by 8-foot table, because the ends cannot accommodate one and a half people. Twenty-four inches of table space is the absolute minimum per diner. People just don't like to eat with their elbows pinned to their ribs. Thirty inches is a lot closer to the ideal, and it allows for more gracious dining (see the drawing on p. 28). And if you use any armchairs, 30 inches becomes the minimum.

It's a good idea to figure in an across-the-table depth of 12 inches for each person at the table. Twelve inches is enough for most place mats, silverware, and a dinner plate. Place-setting depth is especially important when designing a rectangular table where people will sit at each end of the table as well as along the sides. When I design a rectangular table, after I've figured out how many people will sit along the side, I always add 24 inches to a table's length (2 x 12 inches) to accommodate a person sitting on each end of the table (see the drawing on p. 28).

For round tables, 30 inches is the minimum to allow for each diner, because the eating area is smaller by virtue of being pie-shaped (see the top drawing on p. 29).

AVOIDING THE NO MAN'S LAND

So now you must consider the shape of the top. Round and rectangular are by no means the only options. Square tables are suitable for up to eight people. To seat twelve—three on a side—would require at least a 7-foot square, which leads to a no man's land in the center that no man, woman or beast can reach. The same thing happens with those 8-foot round banquet tables. They're OK at the Waldorf-Astoria, but they don't work if you're serving homestyle. No one can reach to the center of such a table without dragging his tie through the custard. What worked for King Arthur does not necessarily work at home.

Consider the same dilemma when you are deciding dimensions for the width of your table. Most dining tables average about 36 inches across and vary from 30 inches to 48 inches. A narrow table adds intimacy between diners on opposite sides. Anything wider than 4 feet presents that no man's land with the logistical problem of passing the food or reaching the wine.

If 5 feet is the largest permissible square, the smallest comfortable size for a square table for two is about 32 inches; otherwise, knees are bumping, and there is little room for the food. Remember, if you are putting a square or rectangular table in a small area, it is a good idea to round off the corners to prevent bruised thighs when navigating around a table in cramped quarters.

Another popular and traditional form is the oval (or ellipse), which is quite pleasing to the eye. From the builder's perspective, however, it can be diffi-

cult. The obstacle is the base: Should it be rectangular or oval? A rectangular base with an oval top looks peculiar when viewed from certain angles. The reason is that the legs are extremely close to the sides, while the end overhang appears disproportionately large (see the drawing at bottom right). It can be a visual disaster, kind of like someone wearing a hat with a too large brim. The alternative is to construct an oval base, not an easy task for the inexperienced.

EXTENSION TABLES LEAVE ROOM FOR EXPANSION

In those cases where the number of diners will change dramatically from time to time, an extendable table might be the ticket.

There are numerous clever and ingenious methods used to make tables larger and smaller. One of the oldest and simplest methods is the drop-leaf table. One or two sections are hinged and hang down along the table's legs when it's not being used. When the leaves are folded up, a hinged leg or sliding support is moved into position to support the leaves (see the drawing facing page).

Like most things in life, drop-leaf tables have their advantages and disadvantages. Because most drop-leaf tables are reduced in size by about two thirds when the leaves are folded down, they work well in places where a table gets occasional use and spends most of its time pushed against a wall. Two disadvantages come to mind: drop-leafs, with their attendant swing-out legs, are not as sturdy as other forms. And when the leaves are folded down against the legs, it is impossible to sit comfortably at the table's side.

A not-too-often seen form of extension table is the swivel top: a rectangular base with a hinged, double rectangular top that swivels 90° and unfolds into a large square (see the drawing above).

The most common extension table consists of two halves connected by two telescoping slides onto which one or more leaves are added. Each 24-inch leaf seats an extra person on each side of the leaf. Keep in mind that a 12-inch leaf will not accommodate an additional person. Although I have built scores of different extension tables, I have my reservations about their utility. A table cut in half and rejoined with slides is just not as sturdy as a solid table base.

THREE TABLES CAN WORK AS ONE

I have come up with a successful solution to the problem of a varying number of dinner guests. I designed a set

SWIVEL-TOP TABLE DOUBLES IN SIZE

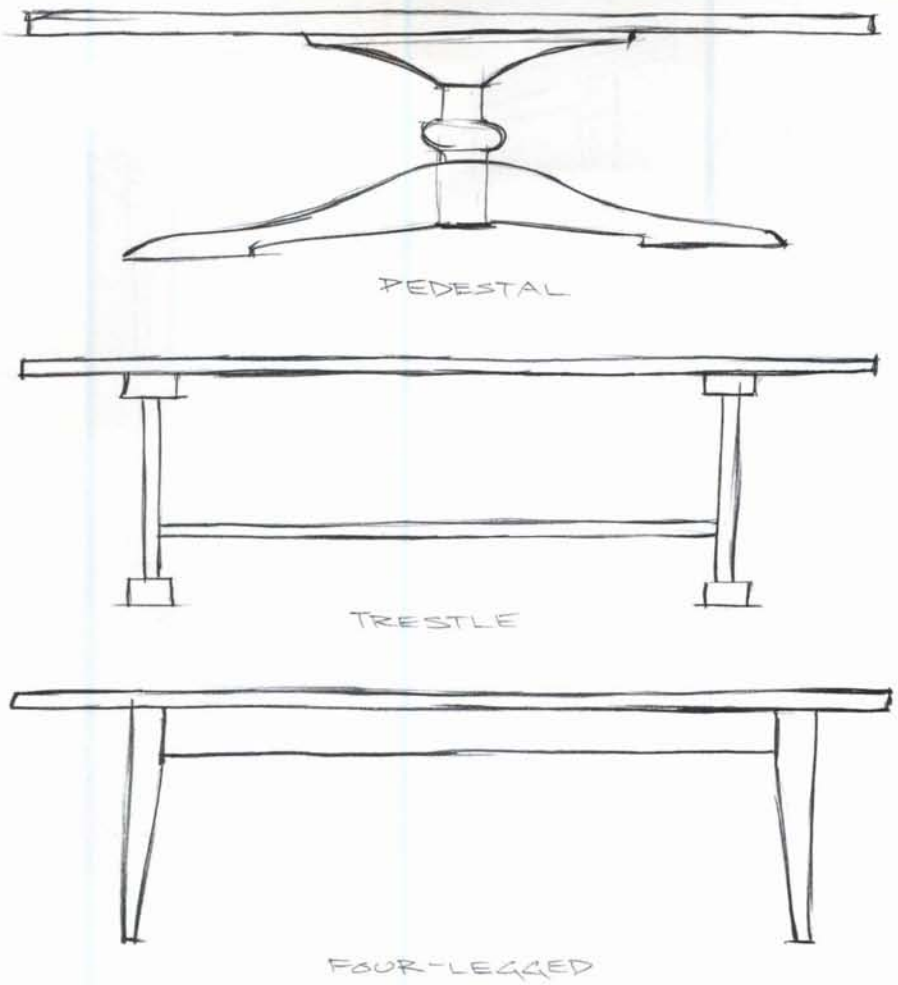
The hinged double top unfolds, rotates, and comes to rest back on the base, effectively doubling the size of the tabletop.

BAD PROPORTIONS

An elliptical top on a rectangular base is awkward because the overhang on the ends is disproportionately long to that on the sides.

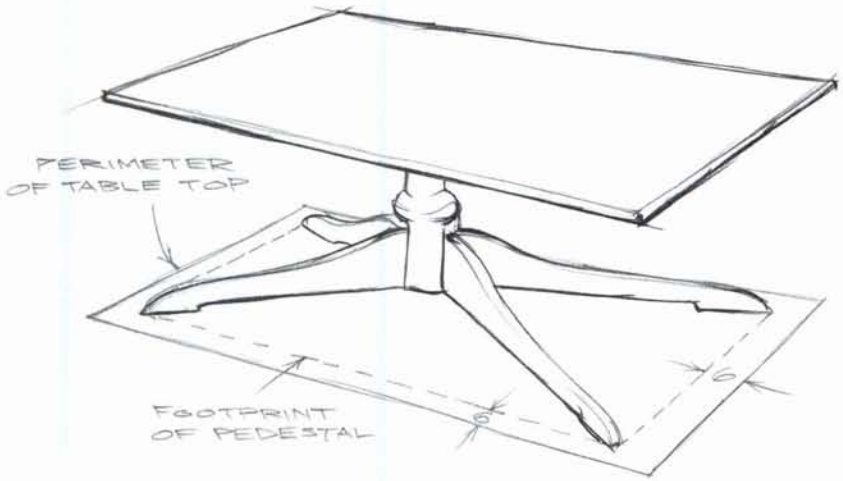
IT'S NOT JUST A QUESTION OF STYLE

Pedestal, trestle, and four-legged table bases all have different ergonomic benefits.



FOR A STABLE TABLE

To prevent a pedestal table from tipping, the footprint of the legs should cover an area no more than 6 inches smaller than the perimeter of the top.



of three tables for a family that liked to entertain but did not have the room for one massive table. The main table was 3 feet by 7 feet, with two additional 3-foot square tables that could be butted against the ends of the main table as the number of dinner guests increased. One of the square tables was used as a side table on a everyday basis, while the other one had folding legs and was stored in the closet. This setup gave them the maximum flexibility of using one, two or three tables, separately or together in any number of configurations.

TABLE BASE BASICS

Once you decide how many people you want to put around your table and determine the shape of your top, you should make sure your diners will not have table legs and aprons bumping into their knees. There are three basic forms of dining table bases (see the drawing at left).

The pedestal table base has a single leg or grouping of legs in the middle, with cross-bracing on top and a heavy base on the floor for stability. Because there is usually no apron—there is little structural need for one—the table design allows for additional legroom. Pedestal bases often allow room for crossing legs at the table. The major drawback is the large base, spread out on the floor under the table. No matter how carefully planned, it gets in the way and takes a beating every time diners move their feet.

A good rule of thumb for pedestal tables is that the pedestal's base should cover a footprint just 6 inches smaller in all four directions than the perimeter of the top (see the drawing at left). For instance, a table with a 36-inch by 60-inch top should have a base footprint of 24 inches by 48 inches. Anything more than 6 inches from the perimeter and there's a danger of the table tipping when someone puts weight on the table's edge as they push their chair away and stand up. On a large, heavy table, the pedestal footprint can be up to a foot

smaller in each direction than the perimeter of the top because the table's weight will act as a counterbalance.

Trestle tables are similar to pedestal tables in some respects: The feet are subject to wear and tear, and the lack of an apron allows diners to cross their legs while dining. It gets its name from its trestle supports, which are a series of legs (with a foot attached at the bottom) connected by a horizontal beam running the length of the table.

I find that on wide tables a single trestle leg at each end creates too much torque on the upper joints. My solution on tables wider than 36 inches is to use two closely spaced legs on each end.

Trestle tables need at least a 14-inch overhang on each end. A 16- to 18-inch overhang is even better. Without such a long overhang, the trestle will be in the way of end-of-the-table diners' knees (see the drawing above right).

As common and humble as the four-legged table appears, I believe it is still the best compromise: adequate leg room under the aprons, table legs that shouldn't interfere with diners, and extreme stability. However, leg placement limits chair placement, so it is harder to add more chairs than the number called for in the original design without having one of the diners sit with a leg between his legs. That is why the pedestal table is more popular in many restaurants.

NEED THAT KNEE ROOM

Allow at least a 14-inch overhang at each end of a trestle table. Otherwise, diners will bang their knees on the table legs.

CUT AWAY THE APRON FOR MORE KNEE ROOM

A thicker, stronger apron can be cut in a concave curve to allow for more knee room.

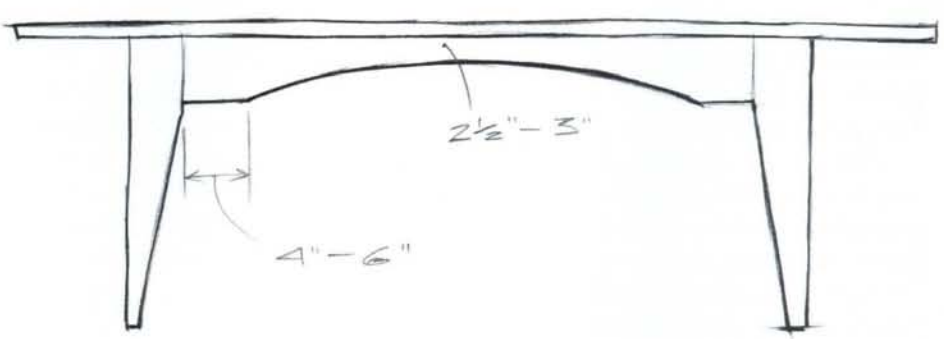


TABLE HEIGHT IS CRUCIAL TO COMFORT

Until about 1950 the normal table height was 29 inches, and antique dining-table tops were 28 inches or even 27 inches high. The population is definitely getting taller, so table height today is usually 30 inches. An exception to this is if you are designing a table to accompany an existing set of chairs. Today's typical chair-seat height is 17 inches. Few things are more disconcerting that eating at a too-high table where your chin is in the soup, so if you are designing a table for a set of low, antique chairs, you might want to consider lowering the table height.

Even with the 30-inch height, today's dining tables don't allow diners to cross their legs—except at trestle tables or pedestal tables without aprons. Even without crossing your legs, you need at least 25 inches of vertical leg room on any table. This means that on a 30-inch high table with a 1-inch thick top, you should have no more than a 4-inch apron.

If you think you need a thicker apron for strength, there is a trick that works for me. I make a wider apron—giving me a stronger mortise-and-tenon joint and a more stable table—but I cut the apron smaller for more legroom by starting a concave curve about 4 to 6 inches from the table leg and curving up to a reduced depth of 2½ to 3 inches (see the drawing above). ■

Chris Becksvoort lives in New Gloucester, Maine. He has designed and built dining room tables for 30 years.

Faux-Finish Furniture

Disdained deception, or desirable decoration?

BY TERI MASASCHI

To many furniture makers, masking wood with layers of paint is a sacrilege. It seems to be an unspoken rule that handmade furniture must be fed only natural finishes to reveal the inherent beauty of the material. Anything less is considered irreverent.

This is a peculiarly modern idea. Since early Egyptian civilization, when wood was scarce and decoration was a way to upgrade the materials, the art of paint decoration could please a rich and discriminating patron. One particular form of paint decoration—grain-painting—was used to mimic fancier woods. Grain-painting was used not just to cover inferior materials but to trick the eye into believing the wood was precious and rare.

In 19th-century America, this idea that grain-painting could improve plain pine furniture was especially prevalent. The efforts range from naive squiggles to sophisticated detailing of astounding delicacy, but the intention was usually the same: to imitate the expensive, urban styles of the day. In much of the work—disdained in the past and usually called "folk art" today—there is a spontaneous creativity that goes beyond mere mimicry. It is as if artists were using furniture as their canvas.

ONCE SCORNED, NOW TREASURED

Painted furniture has gone in and out of fashion for centuries. In America, however, the faux-finish artist has always been the poor, rural cousin to the sophisticated urban craftsman. Painted furniture, usually made of a softwood such as pine, was viewed until quite recently as a lesser product, a deceit masking inferior materials and inexpert skills.

This image was certainly not improved by the commercial success of manufacturing giants like Lambert Hitchcock of Connecticut, who helped

Photo this page: Fred Kissinger

Going faux. Skillful painting by Dan Coble of Angola, Indiana, turned this reproduction of a Queen Anne highboy into a stunning case piece of figured woods. Coble also grained the candlestand and picture frame.

bring painted furniture to a huge audience in the mid-19th century. Hitchcock discovered an untapped market for "fancy" but inexpensive chairs. One of America's first furniture manufacturers, Hitchcock devised stencils for the paint decoration and bronzing, often done over faux rosewood graining. He offered beautiful, colorful chairs for 75 cents apiece. Copycats were everywhere. In 1836, Walter Corey of Portland, Maine, started mass-producing chairs out of plain woods and decorating them with paint. By mimicking the look of wood grain with black paint over a red base coat and dressing up the chair with bronze-powder stencilling on the posts and shields, he could offer a "rosewood fancy chair" to his customers for $1.50. Thousands of these affordable and stylish chairs were sold all over the world.

Fashions changed, mechanization made all furniture more affordable, and in 20th-century America a general

Six steps to bird's-eye figure

To turn this pine chest into bird's-eye maple I applied a succession of glazes—translucent layers of paint—over a yellow basecoat. This technique requires more practice and patience than specialized tools. (Brushes, pigments and solvents are available from many mail-order woodworking supply companies.) To achieve the subtleties of a figured wood such as bird's-eye maple, it helps to have a piece of the actual wood close at hand.

STEP 1: After sanding all surfaces to 180 grit, I coated the pine with a yellow enamel paint. Two coats are adequate, although knotty wood should be primed first.

STEP 2: While the paint dried, I prepared a glaze of burnt umber, raw sienna, glazing oil and turpentine. You also can use pre-mixed, oil-based pigment stains. I applied the glaze quickly in a thin, even coat. With a soft, dry badger-hair brush I lightly stroked the surface until the brush marks disappeared.

STEP 3: Before the glaze dried, I pressed a damp chamois cloth (folded into a wrinkle-free pad) into the surface in random patterns to create a mottled, cloud-like pattern, trying to avoid sharp edges or angular marks. I dry-brushed again to blend and soften the marks left by the pad.

STEP 4: After letting the glaze dry to a dull patina, I needed to create the dark mineral lines found in real maple. I added pigment to the glaze and lightly swirled the brush through the mottled pattern in random curls. I used a chip brush for this, which is an inexpensive, natural-bristle brush.

STEP 5: Using the same glaze and brush, I added the "eyes." Barely loading the tip of the chip brush with the glaze, I applied tiny clusters of speckles to the surface. After waiting a few seconds to let the glaze soften the coat underneath, I used a clean, dry badger-hair brush to whisk the clusters lightly. This produces specks of yellow surrounded by the darker glaze, creating the illusion of the bird's-eye figure.

STEP 6: I let the chest dry for 24 hours and sprayed multiple topcoats of a satin urethane to protect the painted surface with a soft sheen.

massacre upon painted furniture occurred. Time had taken its toll on much of the grain-painting of the 19th century and it was often "cleaned up"—the paint was stripped off—for resale. Faux finishes were considered unworthy as recently as the 1960s. Furniture historian John Gloag, in his book *A Social History of Furniture Design*, championed turn-of-the-century Arts and Crafts designers who rebelled against "debased design, flimsy construction and deceitful finishes." Many beautiful surfaces were lost in the interest of going back to natural wood; whatever has survived is cherished and valuable.

TECHNIQUE IS HARD TO MASTER

Like a magic trick, faux-finish skills are surprisingly simple yet difficult to do well. All grain-painting is done either in the positive or the negative. Beginning with a base coat of paint that is dry, the glaze or graining medium (essentially another layer of paint) is added to the surface and then either removed (negative method) or pressed into the dry base coat (positive method).

The tools for doing this have been as primitive and fanciful as the designs they produce: corncobs, window putty formed into shapes, feathers, sponges, leather, crumpled paper, thumbprints used in repetitive fan patterns, jagged pieces of tin—whatever the creative artisan could devise. There was even an elusive art called "smoke decoration," which is done by making patterns in a wet glaze with the smoke from a blown-out candle to produce the shimmering streaks of grain found in woods like tiger maple. Modern-day faux artists are just as clever: a favorite tool today is a roll of Saran wrap. When this plastic product is crumpled and pressed into a wet surface, the result is quite rewarding. ■

Teri Masaschi builds (and paints) custom furniture in New Mexico and is a technical advisor for Woodworker's Supply, Inc.

Photo this page and lower left photo facing page: George Hawkins

Photos clockwise from top:

■ **Furniture as canvas.** The pattern may resemble actual wood grain, but the bright colors of this blanket chest made by Bill Russell of Philadelphia give the secret away. ■ **Rediscovered treasure.** Until recently, faux-grained furniture like this early 19th-century chest from Bellows Falls, Vermont, might have been stripped to bare wood by second-hand furniture sellers. ■ **Feigning the grain.** For the faux-finish artist, any object can be a tool. Here Dan Coble used pieces of putty to put figure into a Windsor chair. The back is stencilled. ■ **Mahogany masquerade.** Grain-painting can go beyond mere mimicry. In this chest-over-drawers, the author created a stylized grain pattern, not something you would see in solid wood. ■ **Impossible without paint.** The bull's-eye pattern on this chest of drawers by Dan Coble makes it appear as though it was carved out of a log.

Further reading

Classic Paints and Faux Finishes by Annie Sloan and Kate Gwynn (Reader's Digest Books). This book is loaded with useful information and techniques.

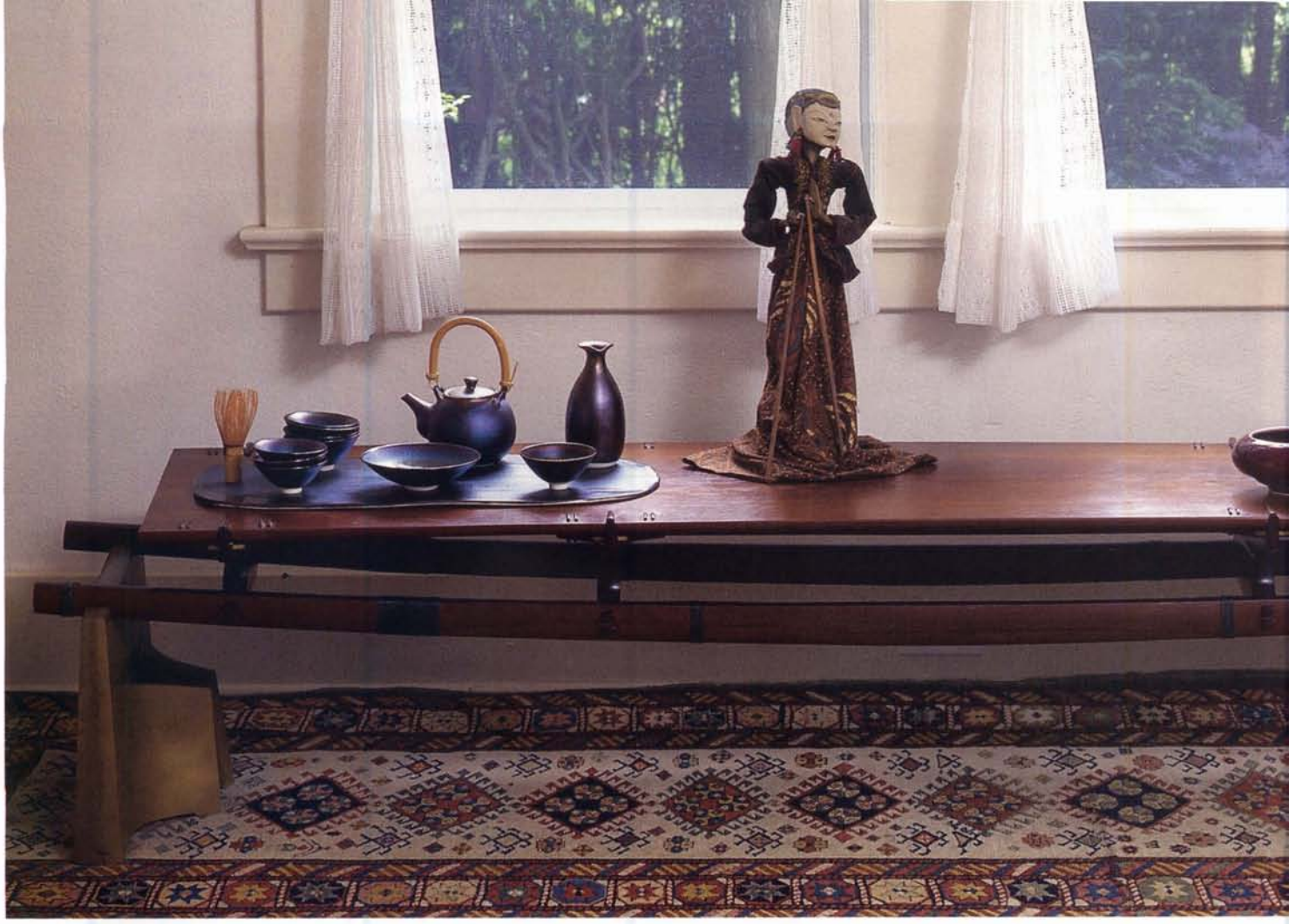
The Art of the Painted Finish by Isabel O'Neill (William Morrow & Co.). The bible of painted finishes, my dog-eared copy is always close at hand. This book remains one of the best resources around.

Recipes for Surfaces by Mindy Drucker (Simon and Schuster). A great book (in two volumes) for techniques, from simple finishes to the most complex faux surfaces.

Master Strokes by Jennifer Bennell (Rockport Publishers).

The Complete Book of Paint Techniques by Penny Swift and Janet Szymanowski (Sterling).

Top photo this page: Greg Benson; center and bottom right: Fred Kissinger; middle right: Old Sturbridge Village



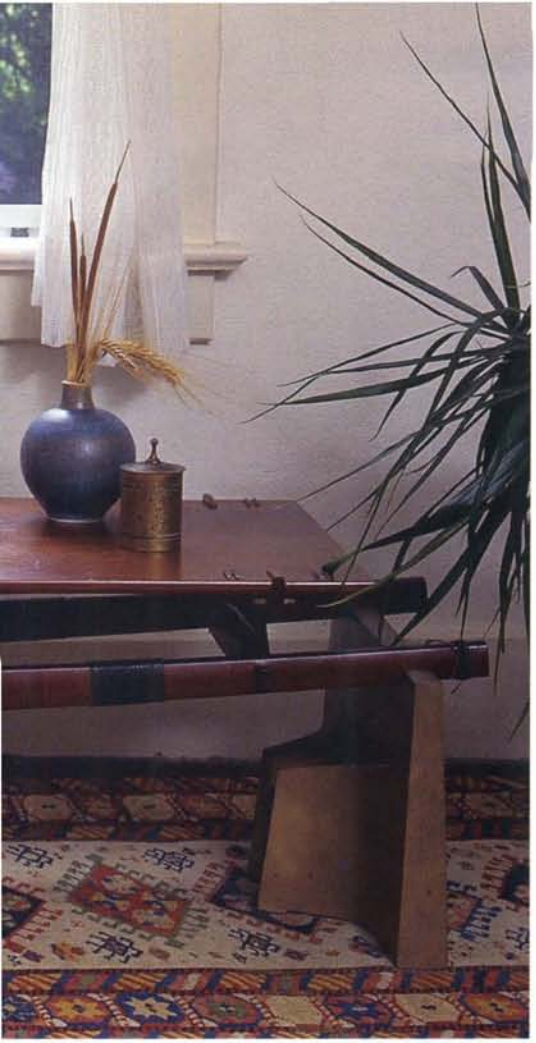
A Quiet Wedding of Beefwood and Bronze

BY THOMAS HUCKER

Tables come down to two parts: the top surface and the structure holding it up. To me, the way these two parts interact is the critical aspect of table design. Some tables are all surface: for example, a pretty slab of wood plopped on anything at all. Others are all structure: your standard driftwood-and-glass table fills the bill here, where the top is an afterthought and there is no integration of the two parts.

In this low table, I've tried to address these issues by using an intermediate structure to tie heavy bronze bases together with a light, beefwood top surface. I intended the whole table to express a play of contrasts: the heavy and the light, the strong and the delicate, the permanent and the temporary. And yet I wanted these dissimilar elements to have enough in common outside the contrasts that the table would feel unified as a design and have a calm demeanor.

I designed the bases to seem heavy and permanent, like footings for a bridge, and had them cast in bronze. I liked bronze for its real as well as its visual weight. The top of the table, in contrast, I wanted to appear as if it



A bridge to the East. The design of the author's beefwood and bronze coffee table grew out of his experiences in Japan and his interest in bridges.

Soft sides, hard edges. Bronze and wood parts alike have inviting, pillowed surfaces, but sharply defined edges keep their forms precise.

Articulate joinery. In a table that mixes through-tenons, linen lashing and bronze keys, even the smallest joinery details are inventive and expressive.

could be carried away, as if it were just a large, light tray. And in fact it can be carried away—the pair of long, curving horizontal rails that form the main transitional elements between the top and bases simply rest in notches at the top of the bronze bases. There is no joinery here, just a snug fit; the whole wooden part of the table can be lifted off the bases. I made these curved rails thick to contrast with the thinness of the top, and I made them thickest toward the center as they curve downward to create a sense of weight and stability. I made these structural parts and the top from beefwood for the contrasts it made in color and warmth with the cool, greenish-gold bronze.

Four beefwood crossbars connect these rails to the top. The ends of the crossbars are cut back in a U-shape in order to make the top float as much as possible. But the crossbars aren't hidden. In fact, they come up through the top at each side, making the link between the top and the structure beneath more explicit. ■

SPECIFICATIONS

DIMENSIONS
72 in. long, 20 in. wide and 16 in. high.

MATERIALS
Beefwood, bronze and waxed linen cord.

FINISH
Oil.

Photos: Jonathan Binzen

Slow Evolution of a Rocker's Arm

BY CARL SWENSSON

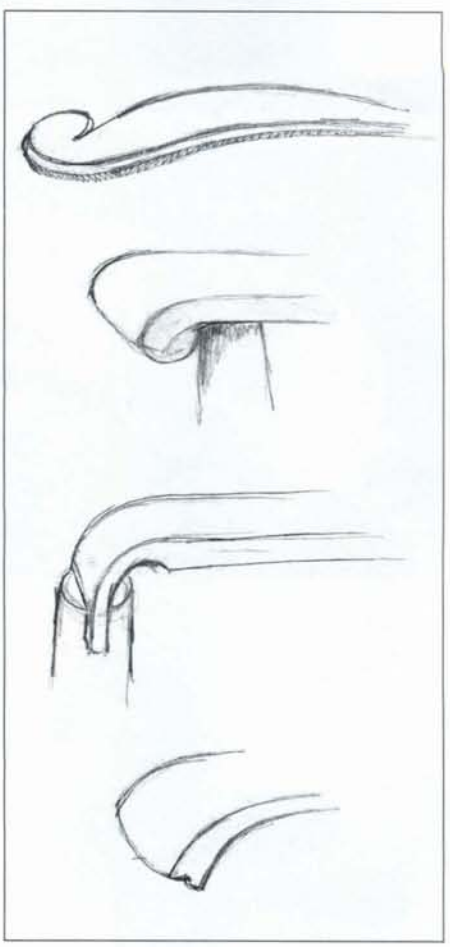
Feeling your way to a good design. Making wood models enabled Swensson to assess the feel as well as the look of various designs for the arm of his rocker.

Simple is hard. My idea was to make a rocker that was as comfortable to look at as it was to sit on, and one that was obviously designed from the start as a rocker and not simply a chair with rockers stuck on. I aimed to avoid distracting detail—inlay, radical shapes, complex carving, splashy combinations of woods—and to create a design whose strength would lie in graceful lines and proportions. But deciding in favor of modest shapes and clear lines is no shortcut. And my intention to build the rocker in small-scale production added another layer of complication. To work through my ideas in detail before I began building, I adopted a more intensive design process than usual, one which included multiple models in wood and clay as well as drawings.

One of the most challenging aspects of the design was finding the right shape and detailing for the arms, particularly their front ends. Since that's the place where you touch the chair most often, I wanted them to have tactile, as well as visual interest. I envisioned arms that were slightly decorative but had some of the infor-

Photos: Jonathan Binzen, except where noted; top photo this page and photo facing page: Scott Phillips

Built slow for quick production. Making models of the rocker's parts helped Swensson work out methods of efficient manufacture along with the aesthetic and structural details. His plan to build the rocker in batches justified putting extra time into the design.



Paper came first. Swensson began designing the rocker's arm by exploring several designs on paper. (From top: country paddle-arm; Windsor roll-under; waterfall; modified Windsor.)

mality of a country chair. The arms also needed to be integrated into the overall design, not forced onto it.

I began by exploring a number of ideas through sketches (see drawings above right). When I came up with something I liked, I made a model of it. I used wood at first, to block out different ideas. Wood models give an accurate representation of the visual weight and actual strength of a design. In this case, they also gave a preview of just what the arm would feel like under your hand.

My first attempt resulted in an arm with a waterfall bend that fit into a slot in the top of the post (see top photo next page). After some experimenting, I concluded that it looked too contemporary and would be too demanding to

Drawings: Author

Sketches in wood. Making the model of the waterfall arm (top) convinced Swensson the bending process would be too demanding. The model of the modified Windsor arm (bottom) revealed an abruptly ended shape that didn't suit the rocker he had in mind.

Axe inspires an arm. Swensson carved a model arm (near left) based on the shape of an American Indian stone axe (far left). The model was uncomfortable to hold, persuading him to try a more rounded form in the next version.

make in a small production run. I next made a wood model of an arm that was rounded along the front and came to a point on the outside edge (photo near left). I got the idea for the shape from a photo of an ancient stone axe handle which I liked very much (photo at far left). But when I translated it into wood it was uncomfortable and seemed incongruous with the rest of the rocker. I then tried a variation on the paddle-like arm of a country porch rocker, but it

Lower left photo: Courtesy of the Department of Anthropology, Smithsonian Institution, cat. #317, 614

Clay for the details. When Swensson had developed his favorite arm shape in wood, he refined its details in the more malleable medium of modeling clay.

Time well spent. The rocker's final arm is appealing from all angles.

was too large for the slender elements of the rest of the rocker. I also considered a rolled-under Windsor chair arm. It struck me as a bit too decorative for this chair and also presented joinery problems. I made a variation on it, an arm that curved down but didn't roll under (see middle photo facing page) but abandoned that as well, since it would have to extend beyond the front leg.

Still working in wood, I decided to reduce the overall size and compress the flourish of the porch rocker arm, making it similar to the axehandle shape in its compactness. Now I felt like I was getting close, so I switched to modeling clay to refine the shape (top photo this page). Clay doesn't represent the final arm as well, but is excellent for working out fine detailing. Because it is so easy to add and subtract material, you can essentially erase a line you don't like and try again. I worked through a number of models until the arm related well to the post and was pleasing visually from several angles as well as comfortable and interesting to the hand.

The kind of time commitment this process required—I spent four months overall doing the drawings, making the models, working out production methods and then building this one chair—would have been out of place if the rocker had been a one-of-a-kind piece. But for a production prototype, I thought it was time well spent, saving me from making a series of full-blown prototypes that weren't right. But model making has its place in developing all types of designs, even on pieces I plan to design and build in a week. Models open up and test ideas that might not otherwise emerge at all and enable me to make my mistakes (most of them, anyway) on the models instead of the furniture. ■

Lower photo this page: Scott Phillips

Library Furniture from Hurricane Hugo

BY TIMOTHY PHILBRICK

To give this table a weighty look, the author wrapped the coved apron around the legs, and tenoned the legs into the apron from the inside.

These pieces were commissioned for a gentleman's library, a room that practically demanded stately furniture with a weighty, masculine character. In my wood bins, I had the perfect material for such a commission—some rare Cuban mahogany I had stowed away for the right job.

Cuban mahogany grows throughout the Caribbean and was the preferred species for the great American and European furniture of the 18th century because of its beauty, size and crisp carving characteristics. Its use was so widespread that scholars call this period the "Age of Mahogany." You can still see this precious tree growing in the Caribbean, but no longer can you buy it at a lumberyard. I got my supply in 1990, when Hurricane Hugo felled a number of large ornamental mahoganies on the island of St. Croix.

It was in my interest to use this material sparingly. Instead of solid wood for the tabletop, I used epoxy to glue a ¼-inch layer of quartersawn Cuban mahogany over a substrate of more common Honduras mahogany, also quartersawn for maximum stability. I was a little concerned about joining these two materials, but after two years the top has remained flat as glass.

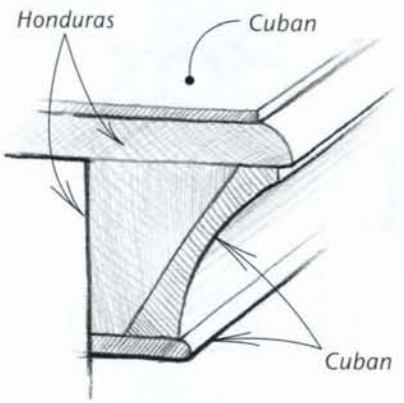
I made the coved rails the same way, with Honduras stock underneath the Cuban mahogany molding. To further conserve wood and to get the grain to follow the curved chair parts, I used small sections of lumber from around knotty areas, as well as scraps from larger pieces.

The only place where the Honduras mahogany is visible is along the thumbnail edge of the top. I used a solution of potassium dichromate to darken the Honduras mahogany to the same deep, reddish patina that the Cuban mahogany will acquire with age.

In keeping with the masculine quality of the library, I wrapped the coved apron around the outside of the legs, mitering the corners to make it a continuous, unified whole. This is a technique that was used in the 18th century, perhaps because it allowed large pieces to be shipped disassembled. To me, it gives the tabletop a weighty, solid look. ■

CONSERVING PRECIOUS WOOD

The author used Honduras mahogany to build up the mitered rails and tabletop. The scarce Cuban mahogany was laminated on top.



Rich colors make Cuban mahogany a prized species. Claret-colored leather upholstery complements the reddish brown of the mahogany, which came from ornamental trees that had fallen during a hurricane.

SPECIFICATIONS

DIMENSIONS
Table: 60 in. long, 32 in. wide and 30 in. high.
Chairs: 19 in. wide, 19 in. deep and 38 in. high.

MATERIALS
Cuban and Honduras mahogany and leather.

FINISH
Lacquer.

Photos: Ric Murray; drawing: Bob LaPointe

Jewelry Box Updates Deco

BY NICHOLAS GOULDEN

Fitting in. The rounded contours of this jewelry box were designed to blend with a modernized Art Deco bedroom suite the author had previously made.

When much of the best furniture you have made belongs to a single client, that client has reached patron status. When they call, you listen. What I heard were dimensions, clearly being read off a tape measure, and specifications for a jewelry box, a surprise Christmas present for his wife. The specifications given were: 24 inches long, 18 inches deep and 12 inches high; rounded corners, lots of different sized compartments and a request, if possible, for a pie veneer on the top. (To learn about how the top was made, see How They Did It, p. 76.)

To our first design meeting I brought sketches, a cardboard mock-up and a selection of planks. We chose curly walnut for its deep colors and a dark, straight-grained walnut for the post-and-beam edging. The silky oak in the interior gives a golden glow and appears illuminated next to the walnut. The pearwood in the trays complements the pink streaks in the silky oak.

The cardboard mock-up proved that the original dimensions were too massive. To reduce mass I manipulated the

Construction on a small scale. Straight-grained posts and beams provide a framework for the pie-veneer top and curly walnut sides.

Made to order. A surprise gift for a favorite client's wife, the box began with a phone call requesting specific dimensions and features, then evolved through a mock-up and a full-scale drawing.

widths of the posts, the depth of the rabbet, the height of the base and the lines created by the lid and drawer openings. One advantage of working on a jewelry box is that small pieces can easily be drawn full-size, so you can see the effect of moving a line even a sixteenth of an inch, a fine detail that can be lost in a scale drawing.

One of the challenges was to give the box a contemporized Art Deco look to integrate it with the rest of the bedroom set I had built. The ebonized mahogany stand used the same profile and finish as the other bedroom pieces. The Art Deco look is the cumulative effect of the geometry of the top, the rounded corners that recall the streamlined era, and the seamless alignment of the grain patterns and the posts.

The use of antique Macassar ebony from an old stash of the client's grandparents for the handles and pulls gave the piece instant family heirloom status. A secret compartment adds to the piece's mystique. ■

SPECIFICATIONS

DIMENSIONS
21⅛ in. wide, 14 in. deep and 11 in. high.

MATERIALS
Walnut, curly walnut, ebonized mahogany, silky oak, Macassar ebony, pearwood and Baltic birch plywood.

FINISH
Oil, shellac and wax.

Photos: Don Russell

Auctioning Off Tomorrow's Treasures

These New Hampshire craftsmen believe that heirlooms need not be old

BY ZACHARY GAULKIN

Craft meets commerce. Tony Hartigan, a stockbroker from Concord, New Hampshire (right), thought a good way to publicize the state's furniture makers, such as David Lamb (left), would be to auction their work.

The telltales of a New England auction are hard to miss: striped tents, folding chairs, fields carpeted by cars with out-of-state plates. This was the scene outside the New Hampshire Historical Society in Concord one evening last summer. It had all the elements of a country auction with one glaring exception: the furniture hoisted to the podium was as fresh as the mountain breeze whisking through the tent.

The auction was an unusual blend of marketing and salesmanship aimed at promoting the newly-minted New Hampshire Furniture Masters Association, a group of 13 seasoned artisans. The mastermind behind it was Tony Hartigan, an irrepressible stockbroker from Concord and a furniture maker's best friend. Hartigan thought that an auction of handmade furniture might attract publicity to the state's talented yet struggling craftsmen and to the sound investment of one-of-a-kind furniture. What better way to get people to notice than by putting the work on a podium?

"We thought we would concede mass production to North Carolina and lay claim to the center of custom furniture making," Hartigan told me recently. He also conceded that North Carolina markets its products far better than a band of country woodworkers. "We knew we had to fire a gun in public rather than in the forest where no one would hear it," he said. "It's amazing the buzz that occurs when there's an auction."

Buzz there was. Publicity before the auction last June ranged from local newspaper coverage to such godsends as a segment about the furniture makers aired on a Boston television station. After the auction, the New Hampshire Furniture Masters were written up in *The Wall Street Journal* and got a private audience with Hillary Rodham Clinton. "She was so enthusiastic," Hartigan said. "She really *got* it."

EACH PIECE HAS ITS PATRON

To protect the craftsmen from pouring hours into a piece of furniture only to

Lower photo this page: Wendy Cahill; all other photos courtesy of the New Hampshire Historical Society, with color photos by Frank Cordell

Among the pieces auctioned was Ted Blachly's curved sideboard in cherry, ash and rosewood, which sold for $4,800.

Tailored by hand. Scott Jenkins poses with his reproduction of an early 19th-century Shaker tailoring counter during the auction preview.

see it go unsold at the auction, or sold at a loss, each of the "masters" found "patrons" to finance the furniture. It worked this way: If a piece of furniture was commissioned by a patron for $1,000 and sold at the auction for $1,500, the maker would collect the profit (minus a percentage for the New Hampshire Historical Society which sponsored the auction) and the patron could have a second piece made for the original $1,000. If the bidding did not reach $1,000, the patron would keep the furniture. As it turned out, half of the 26 pieces sold for more than the original patron price, with some quite a bit higher. One patron paid $2,400 for a smart side chair in the Federal style, which sold at the auction for $3,800. Although the patrons did not realize cash profits, they watched their furniture appreciate before their eyes.

This idea—that handcrafted furniture appreciates in value—is the centerpiece of what really is an educational effort in the form of a floor show. Hartigan compares furniture made by artisans in small shops to fine antiques, both because of its quality and—ever

Bidders got a chance to choose from a range of furniture, from refined reproductions such as this Queen Anne desk to more avant-garde art furniture.

"Anything we can do to advance the cause, we should," says Dennis Hager (left), shown here with his wife, Elizabeth. The couple "patroned" this desk by David Lamb (center).

the broker—its investment value. The auction, a venue normally reserved for antiques, was meant to illustrate that kinship. To cement this idea in the minds of the auction-goers, he enlisted two antiquarian heavyweights: furniture expert John Hays of Christie's, who wielded the hammer, and Jonathan Fairbanks, curator of American decorative arts at Boston's Museum of Fine Arts, who primed the well-heeled bidders with a keynote speech extolling the virtues of handmade craft.

FURNITURE WITH SOUL

"What these people are doing is returning to the 18th-century artisan tradition of 'bespoke' furniture," Fairbanks said in a recent interview. 'Bespoke' in today's parlance means something made to satisfy a particular buyer, a one-of-a-kind item that from conception to completion is treated in a wholly different manner than mass-produced furniture.

"That's when you get the soul in a thing. It comes from the encounter between a person and an object, and risk is involved. By taking that risk, an artisan can produce something that is truly awesome."

If there were any skeptics, just the presence of Hays and Fairbanks at the auction gave the furniture a certain pedigree. The crowd, however, did not seem to require any assurances. Minutes into the bidding a red oak dining table with an Arts and Crafts flavor by Peter Maynard brought $6,500 (see top photo, p. 48). The gavel fell at $8,000 on an upholstered window bench by David Lamb (at left). It wasn't clear how much profit was being made, but the figures were impressive: $9,000 for a pair of outrageously tall ladderback chairs by Jon Brooks, $16,500 for a walnut and glass room screen by Conrad Szymkowicz (top photo facing page). The bidding peaked at $26,500 for a curved, shell-like desk by Jere Osgood (above) but fell short of the "reserve" price and it was sold "to the book," which meant the patron kept it. For a few moments, it felt like Christie's had moved a couple hundred miles up Park Avenue, to the Upper, Upper, Upper East Side.

Not all the furniture went for collector prices (the least expensive of the 26 pieces—a squarish, red oak side table by Szymkowicz—sold for $1,800). Many sold for prices comparable to high-quality, mass-produced furniture found in North Carolina. "If anyone

No view required. This mahogany, satinwood and ebony window bench by David Lamb was one of the more classical pieces on the auction block.

Secretary for the new century. Jere Osgood's elliptical, shell-shaped desk in bubinga and wenge drew the highest bid.

The Queen Anne chest by William Thomas (at right) was commissioned by Harold and Betsy Janeway (left) and sold at a profit.

was in the market for a wing chair, they would have gotten a bargain," Fairbanks said, referring to a Newport Queen Anne chair by William Thomas that sold for $2,500. "I was stunned. Museum replicas are more expensive than that."

Questions of price, however, could not eclipse the real message of the auction, which seemed to be that a well-made, one-of-a-kind piece of furniture contains such intrinsic value that it transcends the day to day fluctuations of the marketplace, sort of like a giant wooden savings bond. The furniture also provides a certain satisfaction in the present. Standing in David Lamb's modest clapboard shop in Canterbury, where chair-leg patterns dangle in the windows overlooking his maple-sugaring shed, you can understand why people ask him to build their furniture rather than pick something off a showroom floor. "I think a lot of people come to our shops because of the emotional attachment," says Lamb, one of the auction organizers who was a cabinetmaker's apprentice as a teenager. "People really love it. It's a gut, heartfelt attachment."

Whether the auction will generate new buyers remains to be seen, but the horizon seems promising. The New Hampshire Masters are lining up patrons and building furniture for the next auction, in September, and the group has decided to jury in new members. Of the original 13, some have found fresh (and far-flung) customers from the auction's publicity. Ultimately, the furniture masters hope to generate enough income and interest to support a retail gallery and to finance a program for apprentices, but they are wary about getting ahead of themselves. "We think it's very important to encourage people to come into this field," says Lenore Howe, a maker of Shaker chairs, "but we also need to make sure there will be customers for them." ■

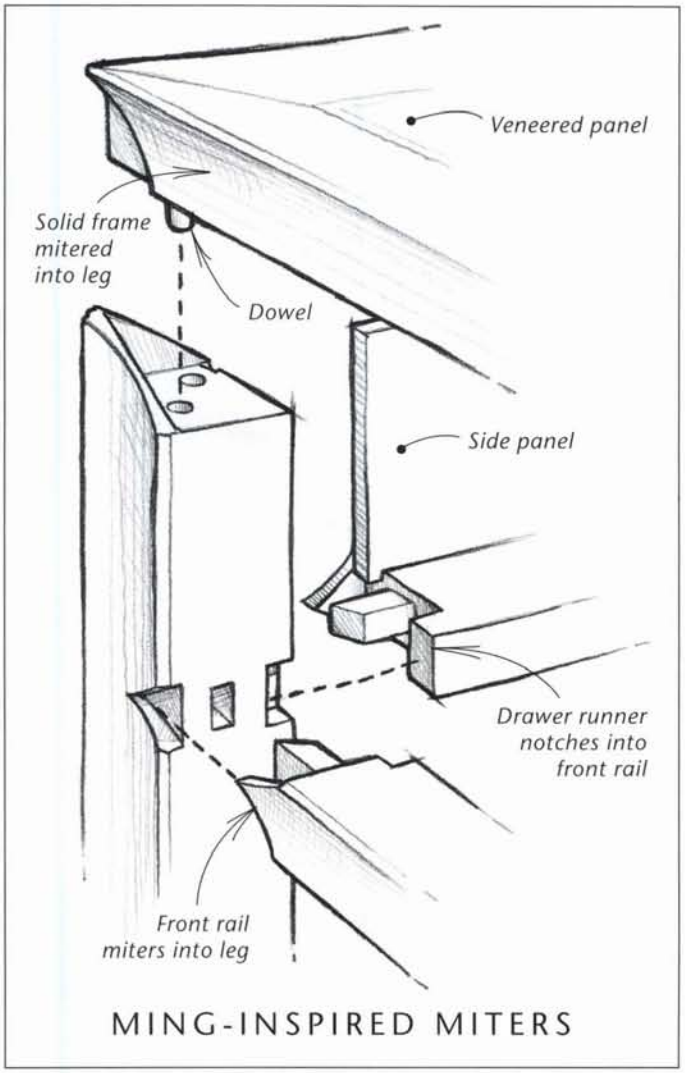
Zachary Gaulkin is an associate editor at Home Furniture.

Mosaic in wood and glass. A bidder paid $16,500 for this piece, described by its maker, Conrad Szymkowicz, as the "Second Millennium Screen." It contains over 1,000 pieces of wood and glass.

Table on tiptoes. Osgood brought two pieces to the auction, including this delicately cantilevered table in bubinga and ash.

Mitering for a Flush Tabletop

BY JOSH METCALF



MING-INSPIRED MITERS

The timeless, almost contemporary quality of Ming dynasty furniture has long influenced the furniture I make. The simplicity of design and the subtlety of proportion mask the complex construction beneath the surface.

One element of Chinese design I used in this table is the mitered, flush-cornered top. This construction prevented me from using a solid top, because there would be no room for expansion with seasonal changes in humidity. The top either had to be frame-and-panel construction or veneer, and because the customer wanted an interesting grain pattern, I chose walnut burl veneer surrounded by curly walnut veneer and hairline inlays, all enclosed within a solid frame.

The challenge with flush tops is in the corners. I used a three-way miter joint in which the top rails miter into the leg at each corner. This allowed me to run the concave leg pattern across the horizontal lines of the top, another detail inspired by Chinese furniture. I repeated this edge profile in the shelf and the narrow drawer divider, both of which miter into the legs. Mitered joinery requires a lot of fussy fitting, made trickier by the concave shape of the rails and legs. These features add substantial work, and therefore cost, to a piece like this.

I also used mitered joinery in the frame of the lower shelf. The lattice, inspired by the intricate fretwork found in Ming furniture, seemed an appropriate way to make the lower shelf reflect the strong geometry and general airiness of the overall design. In step with the rest of the detailing, I cast two bronze bails in a simple and traditional Chinese shape. ■

Photos: Zachary Gaulkin; drawing: Bob LaPointe

Don't fight it, miter it. Mitered joinery allowed the author to frame the drawer faces and side panels with a concave edge profile. Where the horizontal rails meet the leg, this profile produces a modified groin vault.

SPECIFICATIONS

DIMENSIONS
38 in. long, 22 in. wide and 30 in. high.

MATERIALS
Solid walnut and walnut veneer, pau ferro, maple and bronze.

FINISH
French polish and wax.

Hangover-free. With a three-way miter joint between the legs and the top rails, the author was able to make this tabletop flush with the sides rather than overhanging them.

Recreating a Banister-back Armchair

BY STEPHEN A. ADAMS

Splitting the spindle. The spindles are made by gluing together two maple blanks with paper in between, turning them as a whole, and then splitting them apart into identical pieces. The profile of the split spindles matches that of the back legs.

After fruitlessly scouring antique shops for a pair of banister-back armchairs in usable condition, a customer arrived at my shop. Although she had no success finding the right armchair, she did manage to unearth a side chair in need of repair. Rather than buy the side chair and pay for the restoration, she asked me to use it as a model for a set of similar armchairs. I made a deal with the owner of the antique shop to restore the original for free, in exchange for lending it to me while I made my reproductions.

Banister-back chairs were one of the earliest chair forms made in the colonies. The rounded crest rail, turned rungs and split spindles are the central decorative elements, along with the woven rush seat. (Split spindles were also popular decorative features on case furniture of the 17th and early 18th century.) The chair I copied, a simple version without high-style decoration, was probably made in Maine or New Hampshire. Because early American chairs were smaller and the seats slightly lower than today's, I made the seat higher (closer to 18 inches) and a bit more generous than the original. Otherwise, I left the design alone.

The split balusters—the chair's defining element—were easier to make than they appeared. By gluing together the turning blanks with paper in between, I could split them apart easily after I took them off the lathe. The thick, sausage-like sections of the turnings seemed a bit odd to me at first (and they are difficult to turn, since the transitions have no hard edges). But with the reverse curves of the arms, back stretcher and crest rail, all the parts seem to work together in a strangely appealing sort of way. ■

Photos: Dean DellaVentura

Straight-backed but not stiff. Based on a 17th-century example, these chairs may seem a bit stiff for today, but supple arms and a rush seat give them a modicum of comfort.

SPECIFICATIONS

DIMENSIONS
21 in. wide, 16 in. deep and 41⅛ in. high.

MATERIALS
Hard maple and paper rush (seat).

FINISH
Black lacquer over aniline dye stain.

Complementary curves. To reinforce the visual effect of the outward bow of his table's aprons, Walker gave them a downward curve as well. The crossed stretchers below arch upward, exerting an opposing visual force.

Ties that Bind a Breakfast Suite

BY WILLIAM WALKER

The leg comes up to the top of the table, exposing its polygonal section. The aprons are also visible from above and are glued right to the tabletop, creating a very rigid box.

When designing pieces of furniture to go together, I used to try very hard to marry their details. I would make the connections too literal. Now I'm looser about such connections, and I think they actually work better. If I let go a little, I find that more subtle correspondences start to creep in. I designed this breakfast room table several years after the chairs and didn't attempt to make them perfect mates, but as I look at them now, they seem well suited.

One obvious link between them is their material. In both table and chairs I was working with Eastern maple. I used large unbroken surfaces of it across the back of the chair and the top of the table. I used both figured and straight-grained wood of the same species. It achieves a softer, mellower effect than combining different species with strong color contrasts and helps unify an individual piece as well as a suite.

These pieces are also tied together by similarities in the shapes of the table's aprons and the chairs' seat rails. I like making a curved part meet a flat surface to define the curve; this happens in the table where the aprons meet the legs and in the chair where the seat rails meet the front legs. The shapes aren't identical, but close enough to make a link.

In both designs I've also tried to define individual elements but still meld them together so that your eye never stops moving. In the chairs I designed the back to grow out of the back legs. In the table, I brought the aprons and the legs right up to the surface of the top, where they are revealed as separate parts but also combined in a larger pattern. ■

SPECIFICATIONS

DIMENSIONS

Table: 42 in. square and 30 in. high.
Chairs: 19 in. wide, 18 in. deep and 37 in. high.

MATERIALS

Table: Eastern maple and curly maple veneer.
Chairs: Eastern maple and silk upholstery fabric.

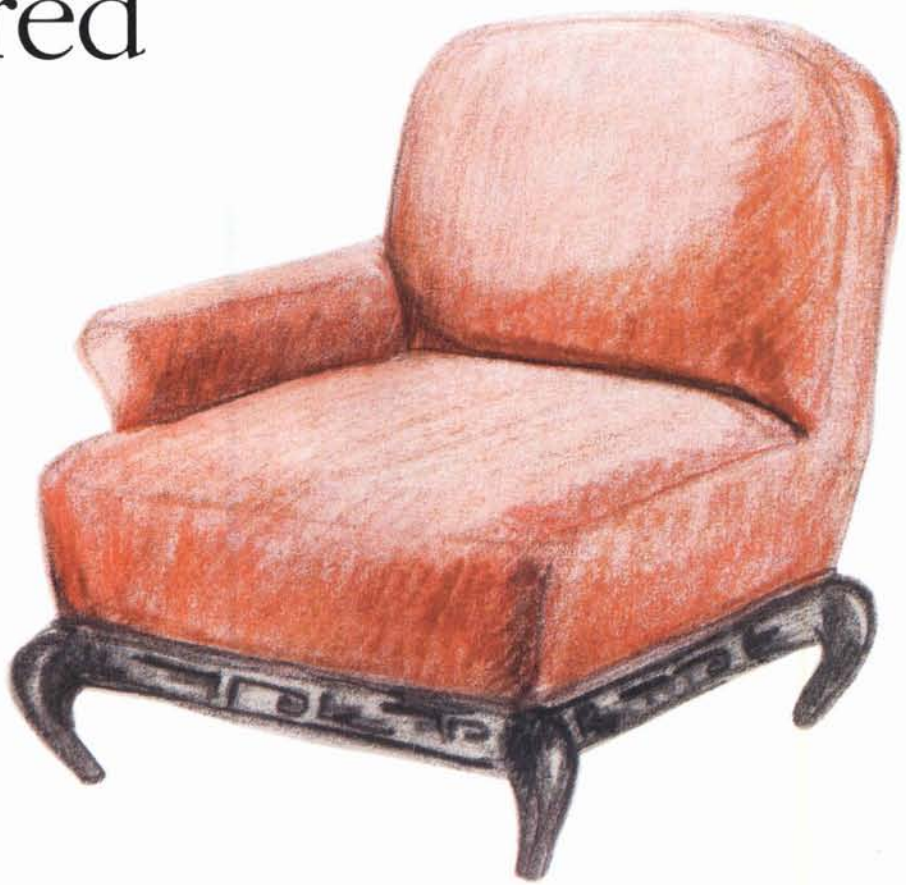
FINISH

Lacquer.

Photos: Jonathan Binzen

Finding the Right Fabric for an Upholstered Armchair

BY BONNIE BISHOFF



Sketches mean less guesswork. The author's colored-pencil sketches help her predict what a fabric will look like on the chair. Above, striped fabric can make a piece appear boxy. In the chair above right, a coral fabric contrasts well with the black carving.

Designing upholstered furniture doesn't end at the drawing board or at the bench, but at the fabric box. Choosing the fabric, I've found, can be as decisive a step as any of the design decisions that lead up to it. When J. M. Syron and I first designed and built this armchair, we had it upholstered with a solid fabric in a warm coral color. We liked the combination on paper—we had used colored pencil to shade one of our sketches—and when we held a swatch of the fabric up to the chair frame we liked the way it contrasted with the ebonized finish on the carving (see drawing above). But after the chair was upholstered we discovered the downside of a solid, untextured fabric: it can create a very flat effect. With so much upholstery on this chair and such broad unbroken surfaces, the fabric needed to be more lively. We have since made this chair a half dozen times and learned something about fabric each time.

When we were picking fabric for the

Photo: Joseph Dominic Chielli; drawings: Author

second of these chairs, we did more colored pencil sketches to get an idea of what certain fabrics might do to the chair. Red leather was tempting, but expensive and not easy to sell. Floral patterns and large organic patterns seemed destined to overshadow the carving in the chair's rails, or to make the angular geometric figures in the carving seem unrelated to the rest of the piece (see drawing at right). We sketched predominantly linear fabric patterns, too, but they made the armchair appear boxy, and we didn't like the visual effect of stripes meeting at right angles at some of the seams (see lower drawing on facing page).

We took the middle road and tried a gray and gold fabric with a very subtle wavy line in the weave. It had much more texture than the fabric on the first chair, a warm color, and some movement in the pattern. When the chair was covered it looked elegant in a formal way, but from a distance you couldn't see the texture.

Our favorite solution so far is the tapestry fabric pictured here. Made by the Jack Lenor Larsen Company (212-462-1300), it is a delightful combination of a simple, almost hand-wrought geometric design, subtle color variation and a soft brushed texture. While it contains a strong geometric line, the richness and irregularities in color and pattern keep the pattern fluid to the eye. It activates the surfaces of the chair and yet its powerful, primitive shapes seem to enhance rather than outdo the carvings below. We never imagined using such bold fabric, but when we saw it, we knew it would be a great fit. ■

An unwelcome bouquet. Sketches convinced the author that a strong floral design could overshadow the angular carving below.

Fabric adds a fourth dimension. An upholstered piece can be beautifully designed and built, but it still relies for its impact on the fabric. The author chose fabric that worked with her carvings, which are based on Hopi Indian fertility symbols.

Bringing Back Biedermeier

BY NIKOLAUS MELLER

The Biedermeier style emerged in Germany, Austria and Eastern Europe around 1815, at the end of the Napoleonic Wars. The furniture makers of this new style relied on native woods—apple, birch and cherry—and omitted typical characteristics of the Empire style that preceded it, such as expensive fabrics, exotic woods and gold leaf. The Biedermeier style lasted more than a generation and influenced painting and literature, as well as furniture design, before coming to an end at mid-century.

The first Biedermeier furniture that I encountered was during my apprenticeship in Munich. In Germany, Biedermeier furniture is as common as Chippendale is in New England, and just as pricey. My opportunity to build a Biedermeier piece was my only chance to own one.

The original Biedermeier sewing table that inspired this reproduction dates back to 1820 and came from southern Germany. I did not get the chance to inspect the original so I had to work from a photo the size of a credit card. After researching other examples, I determined an appropriate height, then scaled the photo and calculated the proportions.

I used avodire crotch veneer for the nine-piece sunburst pattern which flows across the top, over the edge and down the circular apron. The curved legs are ebonized maple and the base has ebonized sides and stringing. The only solid ebony is in the edges of the top and in the escutcheon, which is inlaid into the drawer front. I added a tincture of red mahogany stain to my shellac, which gives the table its golden shine. (For more information about the construction of the table, see How They Did It, p. 76.) ■

Photo reproduction. This Biedermeier sewing table was scaled from a credit-card sized photo of a German table from the 1820s.

Solid as a brick. The circular apron of this table is made up of stacked or "bricked" pieces of mahogany and veneered in avodire and ebony.

SPECIFICATIONS

DIMENSIONS
20 in. in diameter and 32 in. high.

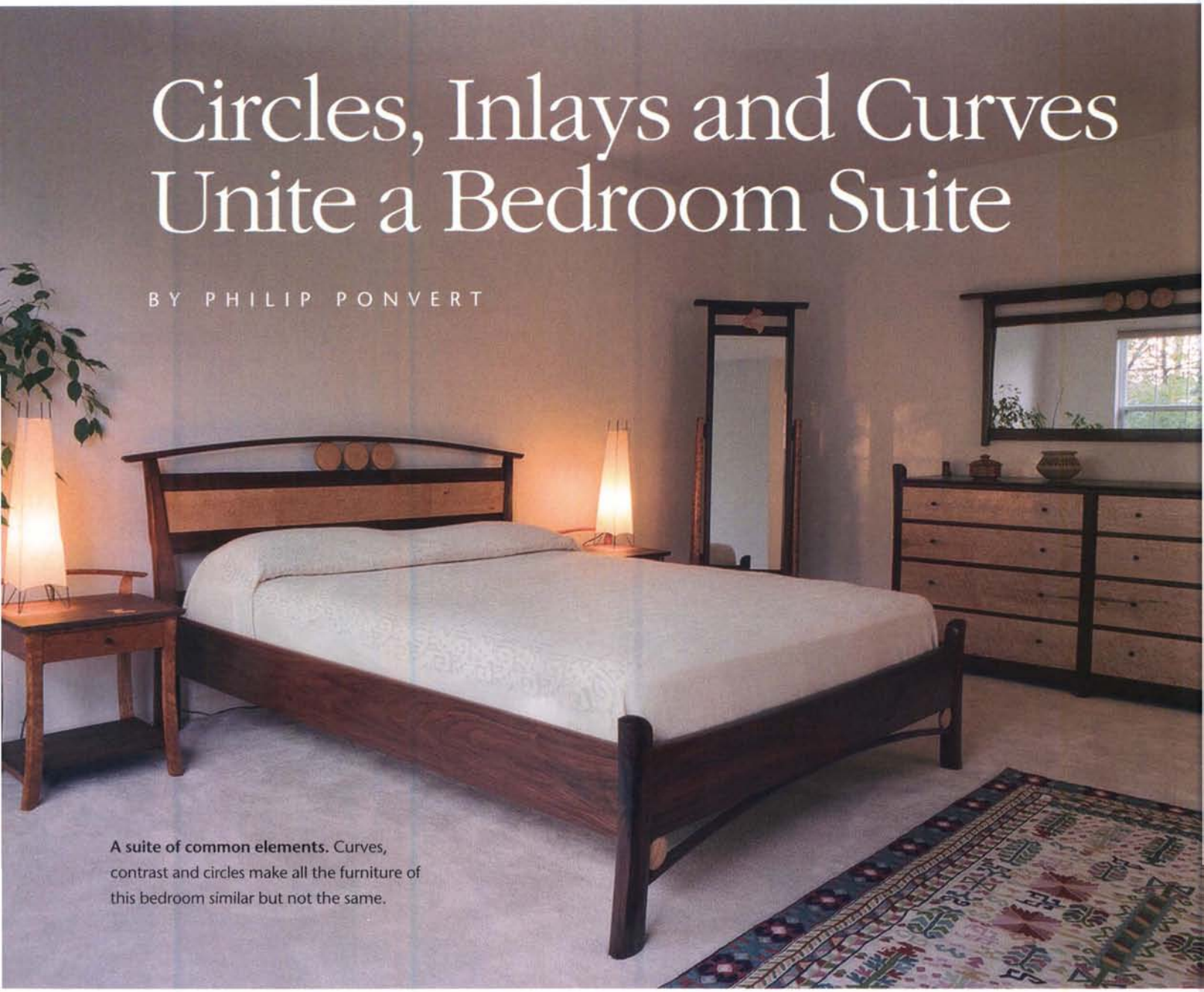
MATERIALS
Avodire veneer, ebony, ebonized maple and mahogany.

FINISH
French polish.

Photos: Scott Phillips

Circles, Inlays and Curves Unite a Bedroom Suite

BY PHILIP PONVERT



A suite of common elements. Curves, contrast and circles make all the furniture of this bedroom similar but not the same.

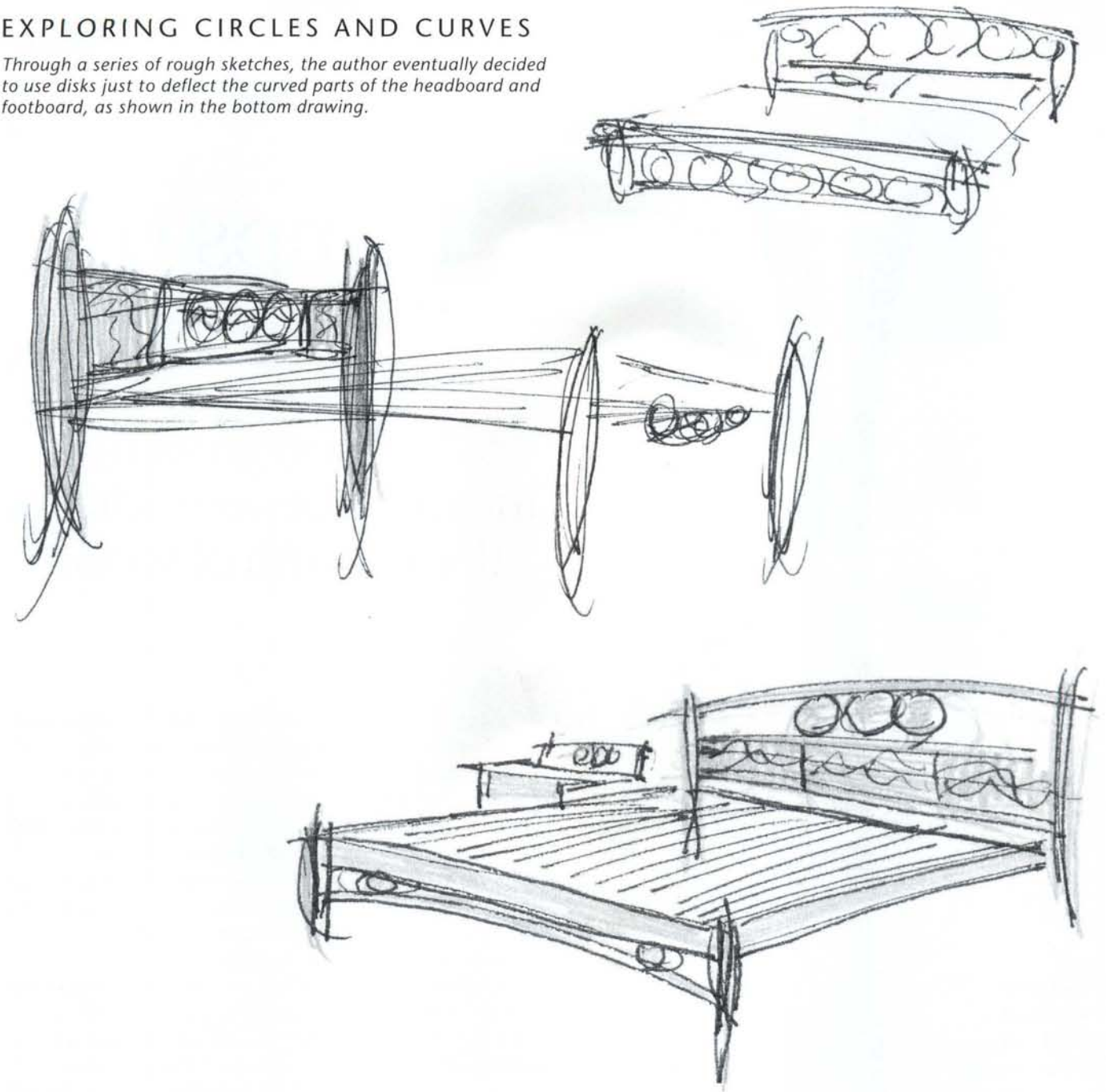
There is a list written on a piece of maple that hangs on my shop wall—four brief reminders that have kept me going on this room commission and others. "Keep Working," first on the list, is my best bet when I'm stuck in a design bind or just tired and confused. "Keep Smiling" is next; sometimes it can make a big difference. "Always Improve" is true with all aspects of life but, in this case, it refers to my eye and my skills. Finally, "Be Smart With Money" is important to remember because frugality has been critical to my survival. I never want to hear someone say, "Oh, how nice, you *used* to make furniture?"

This bedroom set is made primarily of 30-year-old walnut, cut and air-dried by an older gentleman in Ohio who has shown me much about wood. It was originally to be made of red oak and wenge, but plans change. Remember, "Keep Smiling."

The chest of drawers was the first piece I designed. The customers were intrigued by a smaller version I had made and wanted something with similar features, especially the unusual leg shape. Bringing the legs through the top of the bureau makes it quite different from other case pieces in which the top acts as a roof, capping all the

EXPLORING CIRCLES AND CURVES

Through a series of rough sketches, the author eventually decided to use disks just to deflect the curved parts of the headboard and footboard, as shown in the bottom drawing.

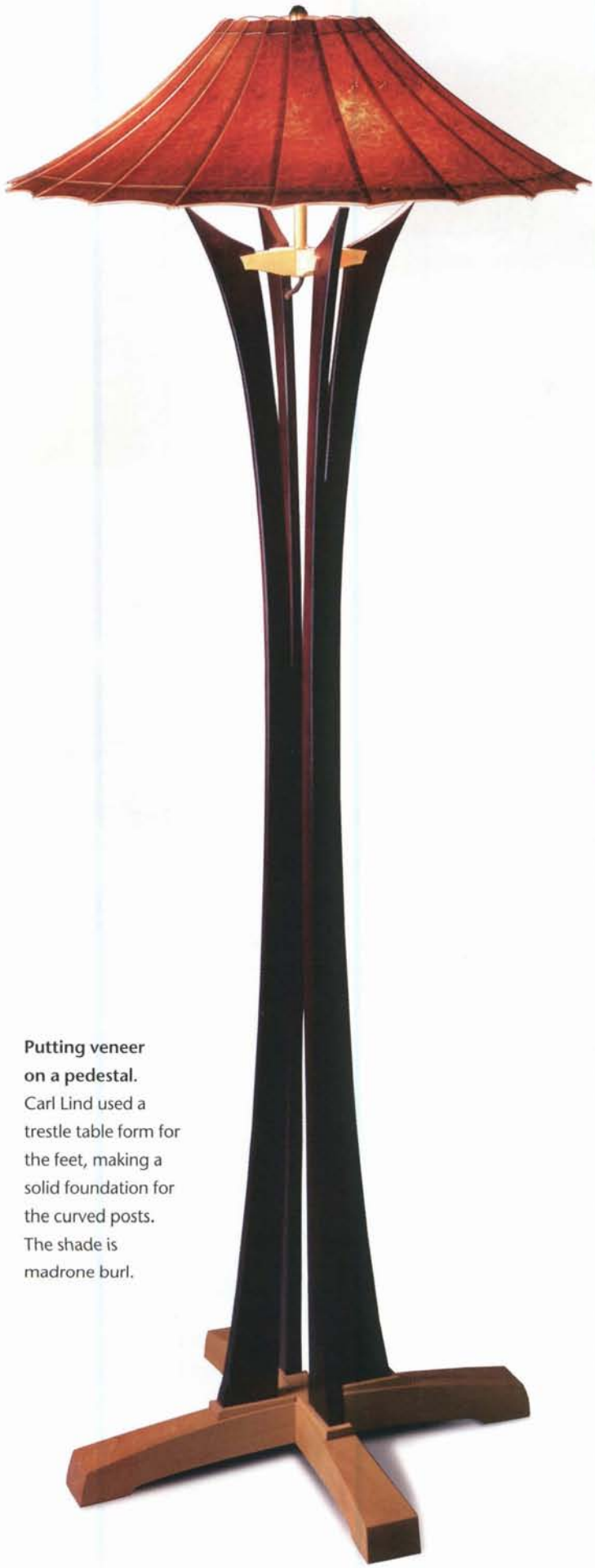


vertical elements. I think this leg design allows the mirror to become more connected to the chest even though it hangs on the wall above it.

I don't like bombarding a customer with the same elements in each piece of furniture, especially those that share a room. The bed design, in this case, flowed from the mirror but did not copy it. Instead, we explored the use of the disks to "push" or "hold" the bent parts (although they don't actually do this; the curved pieces are steam-bent). Then we played with the bent top piece again in the side tables, adding the free-form inlay that is picked up in the standing mirror. Remember, "Always Improve."

In this project, as with all our commissions, we designed these pieces to a budget. (There's that list again: "Be Smart With Money.") I know that many readers would like to know what that budget was, so here goes: In two installments over the course of a year (while producing other work), our shop put more than 450 hours into this project. Go ahead and insert your own labor rate, overhead and materials. And remember, "Keep Working!" ■

Photos: Zachary Gaulkin



Putting veneer on a pedestal. Carl Lind used a trestle table form for the feet, making a solid foundation for the curved posts. The shade is madrone burl.

Lamps of Wood

The soft glow of incandescence radiates the warmth of wood

Lighting is most commonly the province of glass, metal and plastic. A number of artisans in wood, however, have turned their skills to creating clever and, for the most part, functional lighting. Everything from base to shade is being made from wood, a material that seems perfectly paired with the warm, soft glow of an incandescent bulb.

The wide availability of veneers—from exotics to routine domestic species—has propelled the craft forward. Chris Becksvoort, a Maine furniture maker, has made a number of lamps using veneer, including one in which he sandwiches two veneers together, creating random patterns with the overlapping grain lines. Veneer is not only attractive when light seeps through, it also makes for sensible engineering. In John Lang's lamps the fan-like shades are made of strips of veneer laced to a metal ring at top and bottom. The strips expand and contract freely with changes in heat and humidity.

Some of the most inventive forms combine materials. Susan Hersey wraps twigs and branches with paper to make her unique form of "sculptural lighting" designed for atmosphere rather than utility. She uses basket reeds to create a form for the layers of paper, which she sprays on as pulp. The pulp dries into a hard, multicolored paper that becomes the shade, illuminated from inside by a low-wattage bulb. She has made tiny lamps only 18 inches high as well as 12-foot high lanterns made from tree limbs.

—Zachary Gaulkin

Simplicity shines. This lamp by John Lang has an ash veneer shade stitched together at top and bottom, like a Japanese fan. The cord is hidden inside the curved base.

Peel that lamp. Light filters through the cherry layers of this "pumpkin lamp" by Chris Becksvoort. In a similar "onion lamp," the cherry strips of veneer are oriented horizontally.

Lighting from within. Matthew Lewis used Japanese paper and Alaskan yellow cedar to create the floor lantern above.

Incandescent cocoon. Described by the artist, Susan Hersey, as "sculptural lighting," this lamp's shade is made of layers of colored paper pulp which are sprayed over the twig form. No two lamps are ever the same.

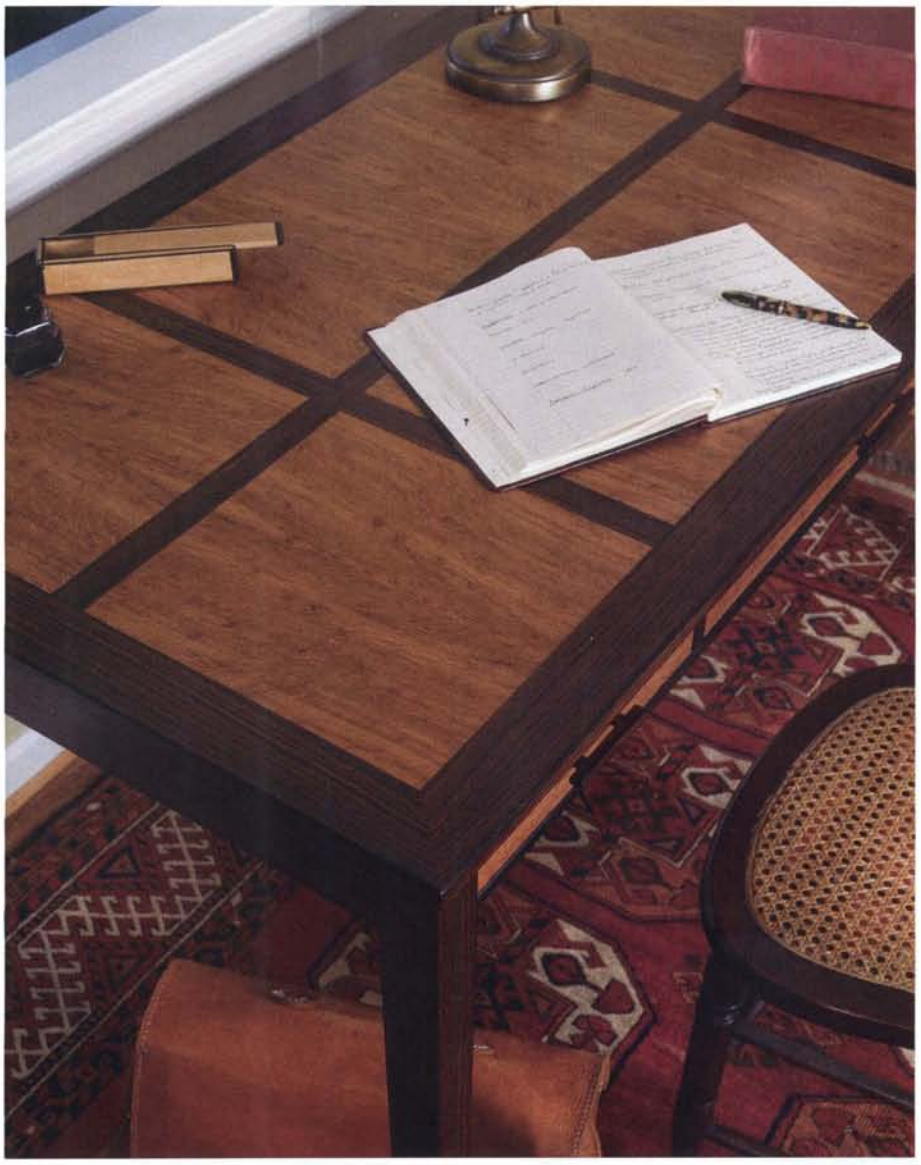
Enveloping the light. Japanese paper with gingko leaves gives this birch sconce by David Finck (above) a soft, peaceful glow.

Photo facing page: Roger Schreiber; photos this page: top left and bottom right: Zachary Gaulkin; top right: Dennis Griggs; bottom left: John Birchard; bottom center: Jonathan Binzen

Desk with a View

BY THOMAS HUGH STANGELAND

Window to the past. The pattern of panes and frames on the top of this table expresses the idea of a place for writing as a kind of window.



The marriage of oak and ebony. The woods in the desk present contrasts of texture and overall color value while sharing some tones, making English brown oak and Macassar ebony an excellent match.

SPECIFICATIONS

DIMENSIONS
50 in. long, 25 in. wide and 29 in. high.

MATERIALS
English brown oak, Macassar ebony, Gaboon ebony and figured maple.

FINISH
Lacquer.

Right out of college I got a job making windows. A degree in history will do that to you. It was with an outfit called the Liberated Window Company. People with old houses would hire us to take out their beautiful, drafty divided-light windows and carefully build replicas fitted with thermapane glass.

I thoroughly enjoyed making those windows, and it was a good way to prepare for making furniture. As well as providing the money I needed to set up my first shop, the work gave me an appetite for precision and an appreciation for strong, light construction.

I was thinking of those windows when I designed this writing desk. I had some sheets of English brown oak veneer and some of Macassar ebony that I thought would look beautiful together: the coarse, open-grained oak with its autumnal, golden hue framed by finely grained, quartersawn ebony. I designed the desktop—fields of brown oak separated by crossbars of ebony—to try to convey the feeling of looking through a window while sitting at the desk. I liked it as a metaphor for what you are doing as you write something and also as an acknowledgment of the place I got my start.

In planning and executing the veneer work I drew on the design and precision of those windows, particularly the way their molded muntins and mullions met in crisp, four-way miters where they crossed; if any of the angles were off, so were the contours of the moldings, and the window looked shabby. The same would have been true here when I cut the bands of ebony veneer to meet in four-way miters. Where those tiny points of ebony met, the smallest gap in a joint would spoil the view. ■

Photos: Jonathan Binzen

Music of a Fluted Cabinet

BY TIMOTHY COLEMAN

The beginning is still clear to me. A persistent image of concave shapes on a convex cabinet. A bicycle ride with my wife, trying to describe this idea. Needing my hands to explain, letting go of the handlebars, veering off the road.

Weeks later, with winter setting in, I hibernate and search for a starting point. I try a full-size mock-up in cardboard. A friend visits. He gives me a funny look and says it looks like a coal-burning stove. My heart sinks, but I say, "You can't see inside my head." I seldom work from detailed drawings, choosing instead to work full scale, feeling my way through the piece. This is not always a fluid process.

Playing the flute. Convex doors composed of concave flutes of varying widths gave Coleman just the tone he wanted in his white oak and maple cabinet.

Coved and coopered. Coleman handplaned the solid maple upper door. The white oak lower doors are veneered coopered panels.

Defining details. Subtle scallops in the lower edge of the waist molding reflect the graduated curves of the doors below.

I know that the door on the upper cabinet is critical to the piece. It entices me with its handcut flutes. I have made a special handplane for this work, but I resist the urge to dive right in. I want to bring the upper and lower cabinets along together to keep the whole piece unified. I cut up veneer for the lower doors (see How They Did It, p. 76). How many panels—four, five, six, seven? I make the sides, leave them long, stand things up, just held together with tape, balancing, precarious.

For several weeks the cabinet is untamed, a wild horse trying to flee the paddock. I carefully lay out a curve only to have it look exaggerated and out of proportion. Always I am trying to rein it in, to bring it to a point of balance between opposing forces—concave and convex, straight lines and curving lines, tension and repose.

Once finished, the cabinet inspires a range of reactions. One person is reminded of a school girl in a pleated uniform. Some see it as light and breezy, ready to waltz across the room; to others it is as solid and rooted as a marble column. To me it is winter in my first independent studio, up to my knees in shavings from the fluted door. It is going home late in the day exhausted, waking early and eager. It is a time when I am bound so tightly to my work that days go by unnoticed. ■

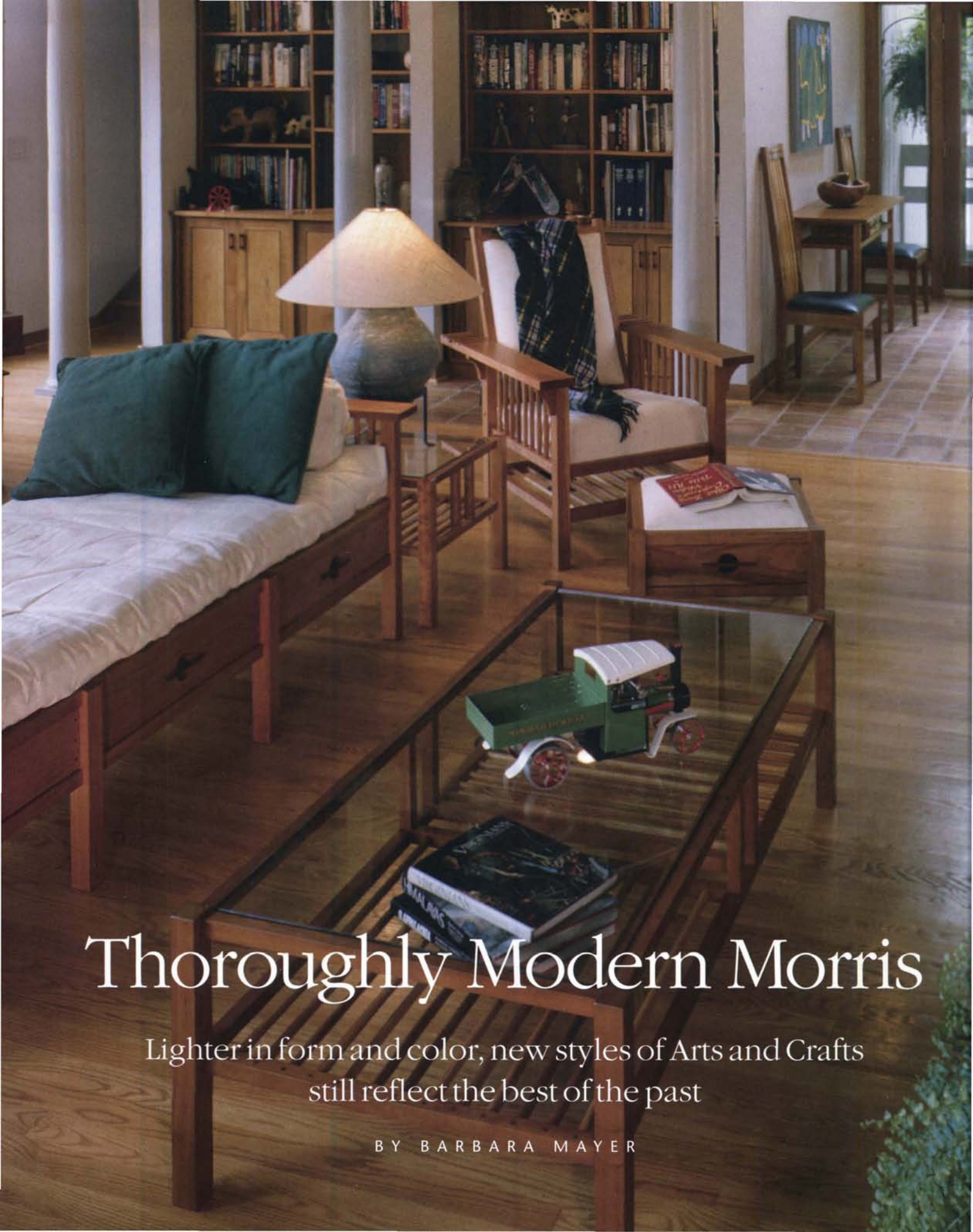
SPECIFICATIONS

DIMENSIONS
23½ in. wide, 10½ in. deep and 55 in. high.

MATERIALS
White oak and maple.

FINISH
Shellac.

Photos: David Ryan



Thoroughly Modern Morris

Lighter in form and color, new styles of Arts and Crafts still reflect the best of the past

BY BARBARA MAYER

Pleasing proportions, beautiful wood and simple lines have made Arts and Crafts furniture a favorite with furniture makers and an informed public. These days, the rest of the world is also taking an interest. The style that stands midway between the uncompromising lines of early modernism and the wild eclecticism of today's art furniture has become popular enough to be featured in the pages of the L.L. Bean catalog and in the showrooms of North Carolina-based production factories as well as in woodworkers' booths at crafts fairs. It goes by several names: Mission, Stickley, Craftsman, as well as the all-encompassing Arts and Crafts.

With so many of the turn-of-the-century originals widely available in antiques shops, today's craftsmen are updating the style by lightening its scale and hue, broadening its design motifs and introducing needed new forms such as computer furniture, oversize beds, coffee tables and electric light fixtures.

SCALING DOWN DIMENSIONS

"The Mission style was always too heavy for me," says Seattle furniture maker Richard LeBlanc. "I wanted a more contemporary look that would work in homes today, so I scaled down the dimensions."

Often, the same individuals who can lovingly reproduce signature pieces by Arts and Crafts masters such as Charles Rennie Mackintosh, Gustav Stickley, C.F.A. Voysey and the Greene brothers are venturing into new territory with adaptations. "After 11 years of reproducing Voysey, I feel I can move off in a slightly different direction," says David Berman, a furniture maker in Plymouth, Massachusetts. He builds exact copies of furniture by famous English Arts and Crafts-era furniture makers, but also makes his own lamps and light fixtures based on Voysey's design motifs.

The foundations of new Arts and

Then and now. The Dirk van Erp lamp, Limbert cutout stand and inlaid Morris chair (top) typify the work done at the turn of the century by America's Arts and Crafts artisans. Today, Green Design Furniture Company has angled and tapered the lines of the traditional Morris chair (lower photo) as well as lightened its finish and upholstery.

Renovating an old style. The light and airy, updated Arts and Crafts furniture of M.T. Maxwell Furniture Co. (left) fits well in a contemporary home.

Photo at left: Jim Phillips Photography, furniture courtesy of M.T. Maxwell Furniture Company; top photo this page: David Rago Auctions Inc.; bottom photo: Matt Spaulding, courtesy of Green Design Furniture Company

Crafts furniture remain the same: showcased wood grain, beautiful proportions and visible joinery. In general, today's adaptations are showier than the originals, sometimes in subtle ways. For example, some furniture has tapered rather than straight legs; other pieces have contrasting wood inlays and cutouts, or decorative metal hardware that is not authentic but is selected because it looks good with the furniture.

SLENDER LEGS AND LIGHT FINISHES

Although the Arts and Crafts style always offered more variety than is generally recognized now, the scale of the new pieces today tends to be lighter than the most familiar of these designs. A sense of delicacy is achieved by the use of wider overhangs, more slender legs and posts, less figured woods, and lighter finishes.

The changes take many pieces well beyond the realm of strict reproductions. These innovations are being welcomed by the public as invigorating offshoots, not condemned as unwarranted liberties. This acceptance goes against the usual cries of barbarism that accompany attempts to update classic designs.

Southwestern Mission. Today's artisans often keep the simple, straight lines of the Arts and Crafts originals, but add inlay and metal details that give pieces a regional look.

An English ancestry. John Lomas of Vermont's Cotswold Furniture Makers was influenced by the less-rectilinear British Arts and Crafts. His dining table has heavy chamfers and carved decoration.

Modernizers of the Arts and Crafts tradition are faring well partly because they keep to the spirit of the original movement. The best adaptations retain the feeling of simplicity and structural integrity that was present in the originals, and the makers typically reveal an understanding of and love for the earlier pieces. Furthermore, many furniture artisans today are philosophically in the same camp as their forebears.

The Arts and Crafts style originated as a protest against what its devotees saw as "false" values characterized by the overdressed rooms and gimcrack factory furniture of the late 19th century. Some of the style's pioneers also attempted to create furniture in an environment that accorded some independence to workers.

Much of today's Arts and Crafts is being made in very small woodworking shops across the country where the owners share many of these same ideals. "I started out sculpting, carving, using fancy woods, doing bent laminations," says M.T. Maxwell, a furniture maker from Bedford, Virginia. "I got sick of it. I wanted to do something functional, to be able to sell five pieces for the same amount of money as one of the fancier pieces and have people feel good about what they were buying."

Top photo this page: The Naturalist Home Furnishings Co., Provo, Utah; bottom photo: Randall Perry, courtesy of Cotswold Furniture Makers

USING TECHNOLOGY WHEN IT IS APPROPRIATE

While embracing the values of their predecessors, many Arts and Crafts furniture makers today have no interest in turning back the clock when it comes to technology and materials. The signature Arts and Crafts wood was quartersawn oak with a relatively dark finish, says Peter Smorto, co-owner of Peter Roberts Gallery, a New York City antiques shop for Arts and Crafts originals. Today, the favored wood is cherry, a less coarsely figured hardwood that is typically given a light finish.

"If Gustav Stickley had access to contemporary finishes, I doubt he would have been using ammonia, which is time-consuming, irregular and unpredictable," says Richard Preiss, a furniture maker in Charlotte, North Carolina. Preiss uses modern varnishes that are far more predictable and durable. Even the Stickley company, which promotes its preference for doing things as Leopold and John George Stickley (brothers of Gustav) did, has substituted contemporary pigmented oils and water-based dyes and stains for the ammonia fuming that was popular early in this century. "We put the Stickleys on a pedestal, but they had to get the production out," says William DeBlaay, director of design and product development at today's L. & J.G. Stickley, Inc. "They were running a factory, too. There were bandsaws, mortising machines, and a division of labor."

MAKING FURNITURE FOR TODAY'S WORLD

The craftsmen at Cotswold Furniture Makers in Whiting, Vermont, apply traditional hand-rubbed oil and wax fin-

Bungalow beautification. When today's owners of early 20th-century bungalows remodel their homes, they often fill them with updated versions of the Arts and Crafts furniture that filled them originally.

Photo this page and top photo following page: Mark Schwartz, courtesy of Berkeley Mills, Berkeley, Cal.

ishes to furniture based on English originals. One of the principals of the company, John Lomas, grew up in the Cotswolds, about 100 miles west of London, where furniture by Ernest Gimson and Sidney and Ernest Barnsley was plentiful. Lomas uses power tools such as a mortiser and a shaper even though the Barnsleys and Gimson disdained the use of anything but hand tools. The methods may have changed, but the Arts and Crafts business philosophy remains. "We make this furniture one piece at a time, with a view to the pieces being in good condition in 200 or 300 years." he says.

In general, however, when today's woodworkers believe that traditional methods yield superior results, they use them. "With most of the Greene and Greene pieces, shaping out of solid material was done by hand," says David Hellman of Watertown, Massachusetts. "There is no machine that can do that. I also stick with a hand-rubbed oil finish, as they would have done."

In addition to using some new technology, today's artisans are adapting the style's forms to today's needs—even those unknown at the beginning of the century—and that is one reason why the furniture is doing so well with consumers. Kevin Rodel adapted Mackintosh's tiled bedroom washstand (now in the collection of the Metropolitan Museum of Art in New York) into a dining room serving piece. Retaining the form and tile treatment, he added more side detailing and changed the top slightly to accommodate recessed lighting.

Furniture makers are using traditional Arts and Crafts details in producing coffee tables, entertainment centers

East meets Arts and Crafts. This Tansu china cabinet made by Berkeley Mills blends basic Arts and Crafts through-tenon construction with traditional Japanese drawer handles and doors.

Pacific style. The early 20th-century work of California architects Charles and Henry Greene incorporated Asian details. Today's reproductions, such as this chair and tables by David Hellman, change little from the original.

Bottom photo this page: Dean Powell, courtesy of David Hellman

New forms. Artisans working today in the style have adapted the original forms to fit in with contemporary needs. New forms include queen-size beds such as this one by Seattle furniture maker Tom Stangeland.

and queen and king-size beds—forms that didn't exist 90 years ago. They also are building these new pieces with today's demanding consumer in mind. "Most of our customers like the old look, but they want a sofa or a chair that feels comfortable to them," says Gene Agress, a founder of Berkeley Mills furniture makers in Berkeley, California. "Arts and Crafts seating did not provide all that much lower back support or arm support. People sat on top of the chair, not in it as is preferred today. We had to make the back pillow thicker and the arms on our sofas wider." ■

A new slant on the style. In updating the Arts and Crafts style, Kevin Kopil Furniture Designs has tapered the legs of its dining table, "floated" the top and put the contrasting ebony slats into groups of threes.

Barbara Mayer writes about furniture history and design and is the author of In the Arts and Crafts Style *(Chronicle Books, 1992).*

Top photo this page: Greg Krogstad, courtesy of Tom Stangeland;
bottom photo: Becky Staynor, courtesy of Kevin Kopil Furniture Designs

how they did it

Some furniture makers in this issue have developed unusual or innovative techniques that are important to the success of their projects. How They Did It illustrates those techniques.

BORROWING FROM THE MASON TO MAKE A CIRCULAR TABLE

The circular apron on my sewing table ("Bringing Back Biedermeier," p. 60) can be made using many methods, but I chose to use a time-tested process called "bricking." As it sounds, bricking borrows from the ancient craft of bricklaying and is used to build up stable forms (usually curved sections) that would be difficult to make out of a solid piece of wood.

I first made a full-scale drawing of the top view of the table, in order to determine the length and radius of the mahogany "bricks." I needed 45 bricks for the apron—five layers of nine bricks. I made a pattern and cut 50 on the bandsaw, just in case I needed extra.

After roughing out the bricks on the bandsaw, I cut the angled ends using the tablesaw and a curved jig to align the pieces at the proper angle. Then I fit them together on top of a medium-density fiberboard pattern, cut to the outside circumference of the apron. I glued brown paper to the pattern so it would be easier to remove it from the finished apron and then glued the first row of bricks onto the brown paper. After the glue dried, I used a router with a flush-trim bit to make the bricks flush with the outside of the pattern. I then glued each layer of bricks on top, staggering the seams as a bricklayer would and using each previous row to guide the router bit when flush-trimming to size.

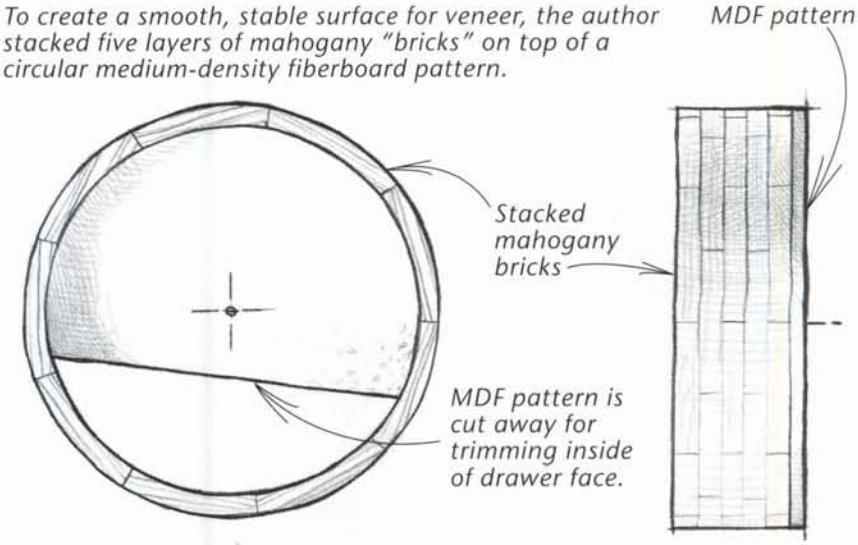
As I added each layer of bricks, I also had to flush-trim the inside face of the drawer front because it would be veneered on both sides and had to be smooth. To do this, I cut out a section of the MDF pattern that corresponded to the radius of the inside edge of the drawer face and used the router to flush cut this section the same way as the outside, row by row.

To trim the apron to the exact height, I fastened the bricked apron assembly (still attached to the MDF pattern) to an auxiliary fence on the table saw. I started the saw with the blade lowered, then raised the blade into the work and slowly spun the apron past it, like a pinwheel, to take off 1/16 inch at a time. I finished the edge with a handplane, then cut through the circular apron to create the drawer opening.

—Nikolaus Meller

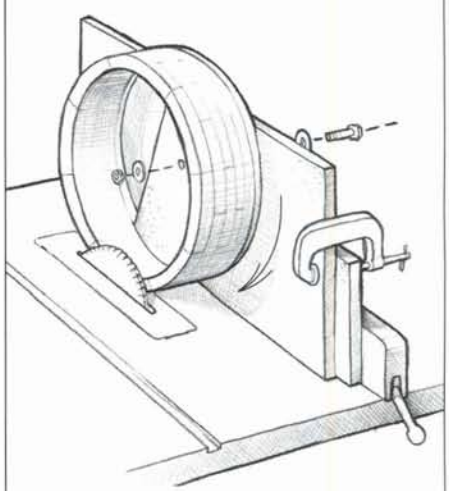
"BRICKING" A CIRCULAR APRON

To create a smooth, stable surface for veneer, the author stacked five layers of mahogany "bricks" on top of a circular medium-density fiberboard pattern.



TRIMMING TO SIZE

The piece is tightly bolted to an auxiliary fence. The blade is raised to take off a little at a time.



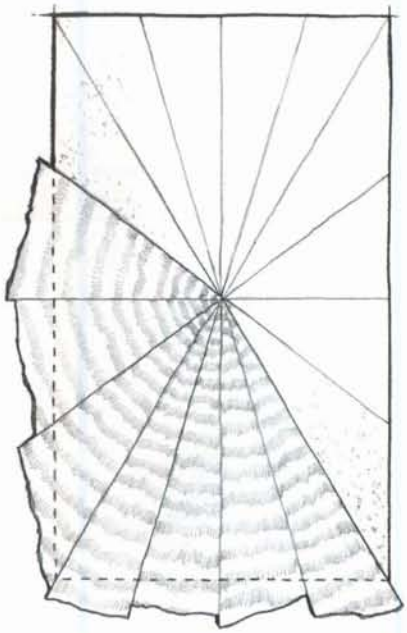
A PIE PATTERN FROM MISMATCHED VENEERS

For the pie veneer top of my walnut jewelry box ("Jewelry Box Updates Deco," p. 46) I first made a full-size pattern out of ¼-inch medium-density fiberboard. I drew diagonal lines from

Drawings: Bob LaPointe

PIECING TOGETHER A PIE PATTERN

Using a pattern helped the author to match color and figure.



the center on the pattern, making sure that lines went to the corners of the frame. As I did not have a stack of matching veneers I had to carefully cut each triangle of veneer so that the colors of the adjacent triangles complemented each other. To make cutting easier, I made a template for each differently shaped triangle. I cut all the triangles with the curl running at 90° to their central axis, so that the curl spirals around the top and the random wood colors give a wildness to the design that a formal book- or slip-matched top would not have.

After each oversized triangle was edge-glued to its neighbor, the assemblage was laid on the pattern to determine where it should be cut. It was then trimmed to size with a router jig and a handplane. I made the pie veneer in two halves and trimmed each straight through the center before gluing them together.

—Nicholas Goulden

COVED COOPERED DOORS

The lower doors of my cabinet ("Music of a Fluted Cabinet," p. 68) are each composed of three concave plywood panels with solid wood strips glued between the panels. I made the panels by gluing white oak veneer over a core of bending plywood. I used this approach rather than shaping the doors out of solid wood for several reasons. First, I wanted consistency in the grain pattern; and second, I was afraid the movement of solid wood was too risky for this piece.

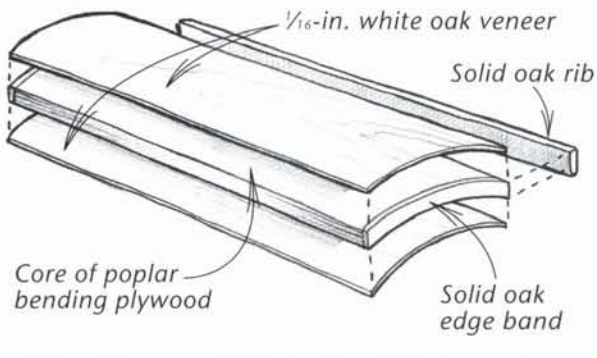
The bending plywood was glued up in a concave form made of ribs of particleboard. When the glue had cured, I flushed off the ends and banded them with white oak, and then laid the veneer in a second pressing.

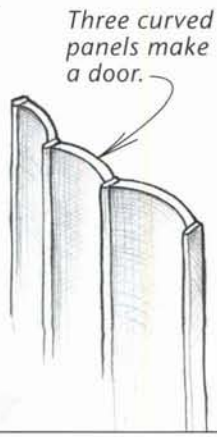
The three panels of each door are different widths, wider toward the center. The solid wood strip rib was glued to one side of each panel before gluing up the whole door. It stands just proud of the surface, enough to give a little shadow and define the point of intersection.

—Timothy Coleman

FIVE-STEP GLUE-UP FOR A CURVED, FLUTED DOOR

1. *Curved core of bending plywood is glued up first.*
2. *Solid bands are glued to the ends of the core.*
3. *Face veneers are glued to the plywood core.*
4. *Solid rib is glued on after face veneers are trimmed.*
5. *Curved panels are edge-glued to make doors.*





Top right photo: David Ryan; lower left photo: Don Russell

the finish line

CATALYZED FINISHES

I've heard that catalyzed finishes are terrific, and that there's nothing better on the market. But I also heard that they are highly toxic, hugely expensive, and that after mixing, they have a very limited shelf life. I want a great finish, but I don't want to lose my shirt, my wallet, or my life in the pursuit thereof.
—Aaron Carithers, Durango, Col.

Catalyzed finishes are a two-part mix. Catalyst and resin are mixed and then sprayed on to form a tough, durable finish. Both lacquers and varnishes are available.

Jeff Jewitt replies: Catalyzed varnishes and lacquers are more durable than conventional finishes, and can be applied as quickly as normal lacquers. Most of them are non-yellowing, and because they have a high solids content, fewer applications are required to achieve a durable finish. Also called conversion finishes, catalyzed finishes meet or exceed the durability standards of the KCMA (Kitchen Cabinet Manufacturers Association), and as such, they have become the preferred finish of kitchen cabinet makers.

The extremely durable finish is the result of a chemical reaction between a finish resin and a chemical catalyst. The finish resin and the catalyst are mixed immediately before application, and the product is always applied by spraying.

Like conventional lacquers, both catalyzed varnishes and lacquers dry to the touch within minutes. This happens as the catalyst initiates cross-linking within the resin molecules. After a week or so of cure time, the finish formed is extremely resistant. Heat, chemicals and water will have almost no effect on the finished surfaces.

There are some disadvantages to these finishes. The catalyst and resin have to be mixed precisely, and you can only spray the finish at certain temperatures. They cannot be used in conjunction with some other finishing products like stearate sanding sealers, oil-based stains and certain dyes. Because the chemical reaction between the resin and catalyst begins immediately, the mixed finish must be used within a specific time frame. In addition, re-coating can only be done within a specific time. Most do not rub out well (like nitrocellulose lacquer will), and repair and stripping of the cured finish is difficult. Finally, because the resins are amino based, formaldehyde is released as a by-product of the curing process, so proper ventilation is required as the finish cures.

A pre-mixed catalyzed lacquer, called, surprisingly enough, pre-catalyzed lacquer, combines the rubbing qualities, depth and clarity of conventional nitrocellulose lacquers with some of the toughness and durability of the catalyzed finishes. These lacquers are made of an alkyd-modified, nitrocellulose resin that has a small amount of a weak catalyst already added by the manufacturer. The lacquer is easier to use than catalyzed products, but it has a

short shelf life and so must be purchased and used within a specific time.

Most catalyzed finishes are solvent based, but Sherwin Williams has recently introduced a water-based catalyzed varnish based upon proprietary resins.

Because catalyzed finishes are ready to use after mixing, they generally need no thinning before spraying, as do most regular varnishes and lacquers. Without the additional cost of thinning solvents, the cost per coat of these catalyzed finishes is about the same as their non-catalyzed cousins.

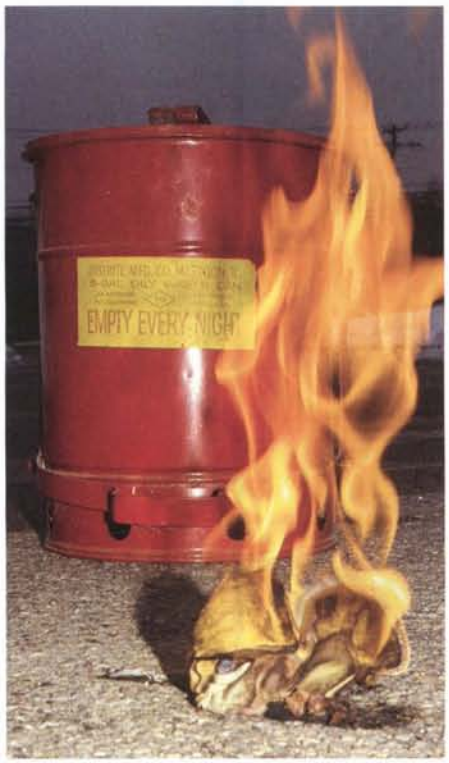
Jeff Jewitt restores period furniture in North Royalton, Ohio. His book, Hand-Applied Finishes, *will be published by The Taunton Press in March 1997.*

FLAMING RAGS

I've heard the horror stories about houses and shops going up in flames due to carelessly disposed-of finishing rags. Why do they spontaneously combust?
—Hugh Symonds, Hot Springs, Ark.

George Dodge replies: Tung oil and linseed oil are two of the many oils found in paints and varnishes that undergo a chemical reaction when exposed to air. When these "drying" oils are exposed to oxygen in the air, the complicated polymerization reaction called drying occurs, which results in the formation of a tough film and a good finish. When the heat produced in this chemical reaction cannot escape fast enough, a fire may result. Such fires are said to arise through spontaneous combustion.

The reaction occurs at the oil-air interface. When the ratio of surface area to volume is large, as in a crumpled cloth, the risk of fire is the greatest. Rags hung to dry in a safe place will radiate away the heat produced during the reaction, while crumpled-up rags may burst into flames in under five minutes.



Oil-soaked rags can burst into flames if they are not disposed of properly. Hanging the rags to dry or putting them in an airtight and flameproof container can prevent spontaneous combustion.

Because product information does not include the reactivity of drying oils, the safest way to deal with oil-soaked rags is to do what Grandpa said: "Get rid of them quickly."

An alternative to hanging rags to dry is to put them in a flameproof rag hamper. Hampers are available from some auto parts stores and paint stores. These airtight containers prevent spontaneous combustion by limiting the amount of oxygen available.

George Dodge is a chemist and physicist who builds period furniture in Portsmouth, New Hampshire.

MORE ON SUNLIGHT AND PADAUK

Reading the reader inquiry on color change in padauk (The Finish Line, *HF* #9, p. 14) reminded me of my own past experiences with this wood. Besides its outrageous color, it also gives off a delightful light fragrance as it's worked. There was a brief time when I wanted to work nothing else.

But, after having made some things out of padauk, I watched them change color from fiesta crimson to root beer, regardless of what I finished them with or where they were placed. That ended the romance with padauk for me. Happily, I learned in time that all was not lost. There are good alternatives available to those who want to use padauk.

First, there is more than one species of padauk. Most of us buy the African species, which changes color as described. Another species, Andaman padauk, has a more subtle and appealing color change. When freshly worked, it's not as brilliant a red as the African, but it typically darkens to a rich wine color instead of muddy brown. The downside of Andaman padauk is that it's harder to get, and it can be hard to work due to its grain structure.

Better yet, if it's simply the brilliant red color you're after, forget padauk entirely and break out the cherry lumber and the aniline dyes. With some high-grade, straight-grained, sapwood-free cherry and various water-soluble aniline dyes, cherry can finish with more depth and luster than padauk. The cherry I've dyed red is still holding its color well after several years, with only basic finishes like shellac applied over the dye. As an added incentive, cherry also has a fragrance when being cut that's almost as nice as that of padauk.

William Tandy Young builds furniture in Stow, Massachusetts.

marketplace

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION
(Required by 39 U.S.C. 3685)

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A. Total no. copies (net press run)	151,893	146,297
B. Paid and/o requested circulation		
1. Sales through dealers and carriers, street vendors and counter sales	29,938	28,458
2. Mail subscriptions	46,250	46,641
C. Total paid and/or requested circulation	76,188	75,099
D. Free distribution by mail, samples, complimentary and other free copies	5,704	6,536
E. Free distribution outside the mail, carriers or other means	3,126	1,484
F. Total free distribution (sum of 15D and 15E)	8,830	8,020
G. Total distribution (sum of 15C and 15F)	85,018	83,119
H. Copies not distributed		
1. Office use, leftovers, spoiled after printing	6,775	9,271
2. Return from news agents	60,100	53,907
I. Total (sum of 15G, 15H(1) and 15H(2))	151,893	146,297
Percent paid and/or requested circulation	89.6%	90.4%

16. This statement of ownership will be printed in the April 1997 issue of this publication. **17.** I certify that the statements made by me above are correct and complete.
Signature: James P. Chiavelli, Publisher.

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fine furniture timbers

BY JAMES H. FLYNN

Deep, Dark Wenge

Somewhere on the foreboding, mysterious River Congo, Joseph Conrad must have snagged his river boat on a sunken log of wenge: the waters he navigated into the Heart of Darkness were also a trade route for tropical lumber. Wenge still grows best in swampy ground along riverbanks in Zaire (formerly the Belgian Congo), and it has been an item of commerce since early in the 19th century. I have a slice of wenge here before me, and it evokes vivid memories, taking me back to 1968, when I had a lucky chance to ride an open river launch a few miles upstream from Kinshasa. A photograph could hardly do as well—you get a powerful sense of the ever-flowing river when you stare long enough at this deep, dark wood.

Wenge, sometimes called pallissandre and bearing the scientific name *Millettia laurentii*, is a member of the great tree-producing (and bean-producing) family Leguminosae. There are about 40 species of *Millettia*, many of them vines and shrubs found in tropical forests. But wenge (pronounced WENG-ghee) is an imposing tree, proudly displaying large, pinnately compound leaves and growing up to 90 feet in height with a bole that is often three to four feet in diameter. The wood is heavy, too, with a specific gravity in the area of 0.75. If you plan on working some, don't be surprised to find a 2-inch by 6-inch by 12-foot piece weighing as much as 60 pounds. One wonders at the muscle and endurance it must have taken to lug this heavy wood out of the jungle and off to market.

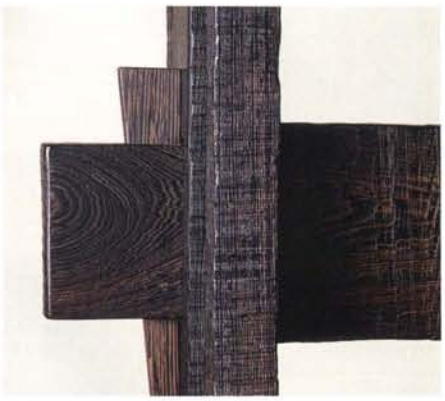
Wenge's heartwood is very dark brown, almost black. Its sapwood is

African Queen. A towering, stately tree, wenge grows best along the riverbanks in Zaire. Its brown-black wood has been exported for making fine furniture since the early 1800s.

Drawings: Bobbi Angell

whitish. On the quartersawn surface jagged, pencil-thin lines, light tan in hue, are interspersed with blackish-brown stripes and make the surface appear as if it has been stroked by the claws of a jungle cat. On the tangential surface the light lines show up as undulating streaks like waves upon the water. Orientation of the grain is an important consideration in order to show the wood at its best.

To work wenge, sharp tools are essential. The wood will sand well and give an acceptable finish if one is aware of the slightly oily surface. Wenge glues well if the gluing is done as soon as the surface is dressed by planing, sanding or scraping. Wenge can be found at many outlets that handle tropical woods and generally costs in the range of $10 per board foot. You may find it marketed as or mixed with panga panga, a nearly identical tree that is native to eastern Africa.



Rough and smooth. Wenge is tough to work but gleams when smooth. With rough surfaces paired with glassy ones, Scott Schmidt's trestle table expresses both sides of wenge's nature.

Unfortunately, as with so many tropical exotic woods, it has been reported that some people suffer skin or respiratory irritation when exposed to wenge's dust. Its toxicity was well-known long before OSHA began collecting statistics; in many parts of the world the bark of several species of *Millettia* is ground to a fine powder and spread upon water to stupefy fish in order to harvest them. When using wenge for fishing, a net is advisable; when using it in the woodshop, try a dust collection system.

James H. Flynn is an Associate Editor of World of Wood, *the journal of the International Wood Collectors Society.*

about the furniture makers

Home Furniture *prints the addresses and telephone numbers of the furniture makers featured in each issue, unless the maker requests that they be omitted.*

CARL SWENSSON
(above) has built Appalachian-style chairs, tracker organs and shoji screens. He recently spent several months in Japan building the doors for a Buddhist temple and is currently designing a line of furniture to be made in small-scale production. He teaches courses on Japanese and Western hand tool use (4618 Parkside Dr., Baltimore, MD 21206; 410-485-5699). *"Slow Evolution of a Rocker's Arm"* on p. 40.

STEPHEN A. ADAMS
was 8 years old when he started making things out of the driftwood he found near his Maine home. He learned furniture making at Wentworth Institute in Boston and then went into the trade, first from his basement and then out of a co-op shop in Portland, Maine. For the last 13 years he has been making 18th-century-inspired furniture from his own shop (Rt. 160, P.O. Box 130, Denmark, ME 04022; 207-452-2378). *"Recreating a Banister-back Armchair"* on p. 54.

CHRIS BECKSVOORT
is a furniture maker, speed skater and contributing editor to *Fine Woodworking* magazine (P.O. Box 12, New Gloucester, ME 04260). *"Dining Table Design Is Not as Easy as Pie"* on p. 28.

BONNIE BISHOFF
and her partner, J.M. Syron, bring a combined experience of 20 years in fine art and furniture making to their work. They create one-of-a-kind and limited-production furniture and furnishings (Syron & Bishoff, P.O. Box 545, Gloucester, MA 01930; 617-872-6299). *"Finding the Right Fabric for an Upholstered Armchair"* on p. 58.

TIMOTHY COLEMAN
worked as a carpenter before he apprenticed with furniture maker Curt Minier in 1985. In the late 1980s he studied under James Krenov, and he has been running a one-man shop for seven years (Two Mead St., Greenfield, MA 01301; 413-772-6363). *"Music of a Fluted Cabinet"* on p. 68.

NICHOLAS GOULDEN
recently spent a year studying furniture design and history in England, and is the president of the Sonoma County Woodworkers Association (Soaring Productions, 1528 Joan Dr., Petaluma, CA 94954; 707-763-7709). *"Jewelry Box Updates Deco"* on p. 46.

THOMAS HUCKER
has taught furniture design and has consulted on furniture design for architects. He spent 1989 at the Domus Academy in Milan on a Fulbright grant (Chelsea Hotel, Apt. 111, 222 W. 23rd St., New York, NY 10011; 212-243-0794). *"A Quiet Wedding of Beefwood and Bronze"* on p. 38.

IAN INGERSOLL
is the owner of Ian Ingersoll Cabinetmakers (Main St., West Cornwall, CT 06796; 860-672-6334). *"A Shaker and a Mover"* on p. 20.

TERI MASASCHI
makes and paints furniture in New Mexico (Box 9, 27 Meadowlark Rd., Tijeras, NM 87059; 505-281-4619). *"Faux-Finish Furniture"* on p. 34.

NIKOLAUS MELLER
completed a three-year cabinetmaker's apprenticeship in Munich, Germany, followed by an internship restoring Biedermeier and Empire furniture. He returned to the U.S. and studied cabinetmaking at the North Bennet Street School in Boston, graduating in 1996 (119 Bennett Ave., Suite #2, Long Beach, CA 90803; 310-434-1264). *"Bringing Back Biedermeier"* on p. 60.

JOSH METCALF
has been a professional woodworker for more than 20 years. In his shop in Woodstock, Vermont, a visitor will find all manner of woodworking tasks underway: custom furniture, odd repair jobs, built-in cabinetry and architectural projects (First Edition Furniture, P.O. Box 25, So. Pomfret, VT 05067; 802-457-3933). *"Mitering for a Flush Tabletop"* on p. 52.

TIMOTHY PHILBRICK
learned furniture making as a teenager when he apprenticed for John Northup, a Rhode Island craftsman and restorer. He now designs and builds furniture in a renovated carriage house that belonged to

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his great-grandfather, an amateur woodworker himself (P.O. Box 555, Narragansett, RI 02882; 401-789-4030). *"Library Furniture from Hurricane Hugo"* on p. 44.

PHILIP PONVERT
got his first woodworking job building model boats for the naval architecture department at the University of Michigan. After five years in the shop of Hank Gilpin, a Rhode Island furniture maker, he moved back to Michigan, where he has run his own shop since 1988 (3045 Broad St., Dexter, MI 48130; 313-426-5415). *"Circles, Inlays and Curves Unite a Bedroom Suite"* on p. 62.

JAMES SCHRIBER
studied furniture design at the Boston University Program in Artisanry in the mid-1970s. He spent several years as a construction contractor in northwestern Connecticut and then opened the shop where he and several assistants make custom cabinets and furniture (57 West St., P.O. Box 1145, New Milford, CT 06776; 860-354-6452). *"Resharpening the Pencil Post Bed"* on p. 26.

GREG B. SMITH
was building feed troughs on a ranch in Montana when he felt the tug of woodworking. Since then he's worked eight years building custom commercial furniture and fixtures and spent two years in the woodworking program at the College of the Redwoods in Fort Bragg, California (438A Harrison St., Oakland, CA 94607; 510-451-6717). *"Side Cabinet the Size of a Plank"* on p. 24.

THOMAS HUGH STANGELAND
designs and builds furniture in the contemporary style of the Pacific Northwest, where natural woods, simple lines and clear finishes predominate. He also works in the Arts and Crafts vein. He began his woodworking career under the guidance of Emmett Day in 1978 and has maintained his own business since 1985 (800 Mercer St., Seattle, WA 98109; 206-622-2004). *"Desk with a View"* on p. 66.

WILLIAM WALKER
moved to California in 1980 to teach at an environmental education school. There he met James Krenov and applied to study under him. Walker also applied to study at the Violin Makers Institute in Salt Lake City. He wound up studying with Krenov and has been making furniture with the touch of a violin maker ever since (10115 N.E. Kitsap St., Bainbridge Island, WA 98110; 206-780-5301). *"Ties that Bind a Breakfast Suite"* on p. 56.

home furniture

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