





# Extraordinary Built-ins

Case-good construction techniques and a furniture maker's sensibility can take "cabinetry" to new heights

BY ROSS DAY

A few years ago, two women walked into my shop unannounced. One of them was the daughter of a client; the other was her interior designer. They were familiar with my furniture and asked whether I would consider making built-in cabinets for them. I said I was not doing cabinets anymore, just furniture. But the women said they didn't want cabinets in the traditional sense. They were looking for built-ins that looked like high-quality furniture.

My curiosity was piqued, because I had never done anything like this before. Case-good construction and furniture making really are two separate disciplines. Built-in cabinets generally are utilitarian in nature. To keep costs under control, the choice of materials and construction follow certain predictable paths. For one, doors often are attached with large European-style hinges, and drawers are usually set on metal slides, all of which make for easier adjustment and faster construction. Cabinets usually are attached to walls with screws, and moldings, if any, are nailed in place.

Fine furniture requires more handwork, such as hand-cut dovetail joints, which are time-consuming and costly if done on a large scale. But furniture presents the builder (and client) with many more options. The choices of materials are endless, and the design possibilities vast. These are all the reasons why I got into furniture making and why I took on this commission.

## Designing a bedroom from scratch

My mission was to create a refuge—a place to relax, reflect and re-energize. The homeowners are both avid readers and art collectors and demanded lots of storage and display space. Their wish



**A unifying theme.** Latticework is used on all of the cabinet doors. Some intersecting members are pinned using brass, colored an antique brown.

list included an entertainment/display center, a corner cabinet, three sliding door screens, three large wardrobes, two bookcases and even some free-standing furniture: a platform bed and two nightstands. Aesthetically, the clients were after what they called a "contemporary Asian feeling."

I looked for a traditional and historical link that I could update and found it in a book on Japanese architecture. I was intrigued by a style of fence and gate that utilized a latticework pattern with decorative nails at the joints. I sketched out various ideas and came up with a scaled-down version of this latticework pattern, which could be repeated throughout the room. The clients liked the idea. The latticework, which is applied to all of the door panels,

became the focal point of many of the pieces, both large and small and helped tie them all together visually.

## Top-quality materials make a difference

The clients requested that the primary wood be Japanese oak, a tight-grained, honey-colored wood. Unfortunately, it isn't available anymore. I was, however, able to track down some old-growth quartersawn American white oak and quartersawn French oak veneer. These are lighter in color and finer in grain than typical white oak and turned out to be a good match.

All of the boxes and panels were veneered medium-density fiberboard (MDF). Edges were covered with solid, shopmade banding, about 1/8 in. thick. Thicker edge-banding allowed me to ease the corners and provided a durable surface. I also used solid maple, primarily for drawer sides and backs. To keep shelves from sagging, I first built up a core of a 3/4-in. plywood surfaced on both









**Freestanding pieces complement the built-ins.** Similar exposed joinery and design details went into the nightstands and bed.

sides with  $\frac{1}{4}$ -in. MDF. Then I veneered the faces and finished off the shelves with  $\frac{3}{4}$ -in.-thick edge-banding.

The designer provided handmade pulls from India. But when I first saw them, I wasn't too thrilled. The pulls were coated with layers of lacquer, shielding highly polished brass. To soften the glare, I sandblasted the pulls and other hardware and chemically treated them to yield a more subtle, antique brown finish.

The designer also suggested using some fabrics as an accent. The door panels of the entertainment center were wrapped in silk, and the corner cabinet was adorned with straw matting. These fabrics added color and texture to the overall scheme.

### Joinery ranged from biscuits to hand-cut dovetails

I used exposed joinery throughout. All of the rails and stiles were connected with bridle joints (also known as slip joints). The tops of lower cabinets (and nightstands) were veneered and framed with solid wood, then joined at the corner with bridle joints. The rails and stiles of the headboard were joined the same way.

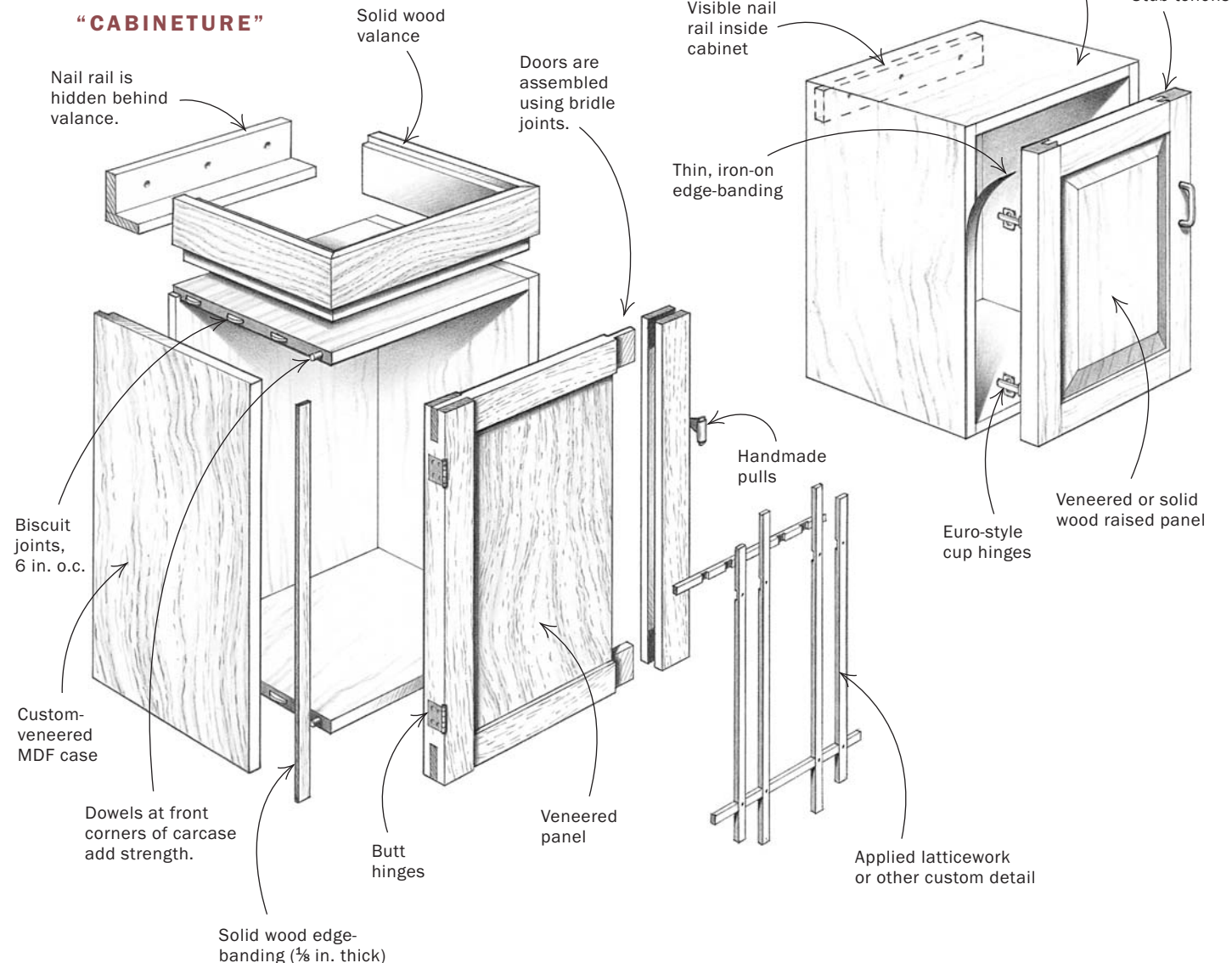
All drawers have variable-spaced hand-cut dovetails with narrow pins. The drawers were built upon frames (called NK drawers) that act as slides, in tandem with wooden guides. NK drawers are very

**Carcase construction is pretty straightforward.** But lots of work went into the doors. Bridle joints are used on all of the rails and stiles. On the inside, sliding wire racks are used for storage.



## TAKING CASE GOODS TO A NEW LEVEL

Although technically still a built-in, “cabinetry” has its feet planted firmly in the traditions of fine furniture. Standard-quality cabinets lack the refinements of “cabinetry.”



strong, and because the drawer sides don't contact the case, drawers are easy to open and close. (Details on building NK slides will be published in the next issue of *Fine Woodworking*, #150.)

The boxes themselves were fashioned like typical built-ins. Biscuits were used to join the cases, and the backs were glued into rabbets. But biscuits don't have a lot of holding power at the narrow ends. So I added dowel joints at the front corners of the cases to make sure they would stay tight. Side-by-side cases were connected to each other using joint-connector bolts, which I tinted antique brown to match the rest of the hardware.

### Time spent refining details pays off

The word details implies small or subordinate, but in furniture, details are as important as the materials, joinery and overall design.

Screw up the details, and the entire project is weaker as a result. Take shadow lines, for example. If a cabinet has too few, it looks bland; too many, and it takes on a busy look. On traditional doors, shadow lines typically are achieved through the use of raised panels and profiled rails and stiles. This project had none of those details; instead, I created shadow lines by varying the thickness of parts. For example, the rails are  $\frac{3}{32}$  in. thinner than the stiles on all of the doors. The latticework on the flat panels is set back from the rails by another  $\frac{3}{32}$  in. The valances that run atop all of the pieces are gapped, leaving a  $\frac{1}{4}$ -in. shadow line. Additionally, the bridge joints on the corners of the headboard, nightstand top and a few other places are emphasized. Either the tenon is proud or the walls of the mortise protrude by a small amount.

The exposed-joinery concept was carried over to the lattice-



**Hand-cut joints and handmade pulls from India.** All of the drawers have variably spaced, hand-cut dovetails. The author sandblasted the shiny original finish on the pulls, then patinated them antique brown.

work. Where members cross, I added diamond-shaped brass pins, which were patinated to match the rest of the hardware.

### A new discipline is born

When it came time to deliver and install the cabinets, I remembered one of the reasons why I got out of cabinetmaking. This can be tough, dangerous work. It took three guys and a Genie Lift to get everything in place. We had to build a bridge over a sunken living room to make a platform big enough to get the lift in position. Then the cabinets took a slow, wobbly ride up 12 ft. before being pulled over the railing to the second floor. That each box made it safely into the room was a minor miracle.

All built-ins must be fitted to walls, which are never perfectly plumb nor flat. To fit these cabinets, I used scribe strips. The cabinets were held back approximately  $\frac{3}{4}$  in. from the walls, and the strips were handplaned to fill the gap. The method made fitting a lot easier and added another shadow line to the rather plain sides of the bookshelves and wardrobes.

This job would have been a lot harder to accomplish had I not been trained in both basic cabinetry and furniture making. For this challenging project, I drew on all of my skills, and that led me to a new standard of woodworking, somewhere in the great divide between case goods and fine furniture. I call this hybrid "cabinature," a style of working that combines the craftsmanship and ideals of both disciplines. □

*Ross Day builds custom furniture in Poulsbo, Wash., and teaches furniture making part-time at the community-college level.*



**Fabric adds texture.** The top of the corner cabinet is covered in straw matting. The same material is also applied to the soffit.