# Making Big Cabinets Manageable

Small parts and knockdown hardware simplify finishing and moving

by Niall Barrett

orking in New York City, where most of my clients live, is trying even at the best of times. There's rarely ever a place to park, so I end up double-parking to unload a delivery, always keeping a sharp eye out for the police. After that, I'm forced to pay exorbitant fees to park my van in a lot. Freight elevators tend to be small and poorly located, and stairways have sharp corners to negotiate. I once delivered a cabinet that would not fit in the elevator, so I had to walk it up two flights of stairs. I was lucky the client didn't live on the 35th floor. Doors and hallways can be quite narrow when you're trying to deliver a large cabinet.

These anxiety-provoking restrictions and horror stories from fellow cabinetmakers

are what started me thinking about cabinets in a new way. It became clear to me that smaller parts were the answer. They would be easier to handle and transport. The challenge would be to assemble them quickly and not have the end result look like a jigsaw puzzle of small pieces. These days, I routinely build large pieces, like the stand-alone television cabinet shown









#### Television cabinet, one piece at a time

For author Niall Barrett, getting a new custom cabinet from his shop in upstate New York to a client's house many miles away is all in a day's work. Many of the cabinets he makes, like the television cabinet in the photos at left, go in pieces and are assembled on the spot with knockdown hardware. Parts for the cabinet easily fit inside a standard minivan (facing page).

At the site, the author sets the base (1), adds two lower carcases (2), attaches finished side pieces (3) and, finally, adds the top, door and hardware (4). Elapsed time is approximately four hours.

above, in easily handled components. When I get to a job site, whether it's in New York City or elsewhere, I assemble the pieces with knockdown hardware.

This approach is not just for woodworkers who make deliveries to a large city. It also works for the guy building a large pantry cabinet in his garage who will have to move it through the house into the kitchen.

## Make cabinets easy to finish and move

Small components are light and easy to move around the workroom and take up less space at every step of the way. For me, that's important because I work in a fairly small shop in the basement of my house. The ceilings are less than 8 ft. off the floor. I often build units that are too large to put together in my shop; they aren't fully assembled until they are delivered to the site.

Whether you use stain, oil, varnish or a sprayed lacquer topcoat, finishes are easy to apply when you work with small components and flat panels. There are no corners to collect excess stain, primer or topcoat, so the finish looks more even. Also, by working with flat panels, you can get a lot more finishing done by spraying pieces vertically. They take up less floor space than finished cabinets, so I can spray more at one time. And by spraying flat panels vertically, they collect less dust as they dry. This can be significant because I usually use a water-based finish, which takes longer to dry than nitrocellulose lacquer.

You can fit an incredibly large volume of material into a small truck or van if the project is broken down into flat or small pieces (see the photo on p. 56). This alone can save a few hundred dollars for the rental of a large truck and the time it takes to pick it up and return it. Oh yes, the other benefit I enjoy is the amazed look on the client's face after the collection of parts I delivered is almost magically transformed into a beautiful piece of furniture.

### Plan ahead for components and fasteners

When I'm in the design phase, I start by thinking about how a piece can be broken down into smaller, more manageable parts and how I'll put it together again. I determine, for example, whether a cabinet with a center divider and two doors can be made as two cabinets. Or I'll weigh the advantages of making the crown and the base as separate components rather than permanently fastening them to the case in the shop. I make a quick sketch, an exploded view of the individual parts, to see whether it makes sense to build something that way. Detailed drawings can follow later.

Once I've determined which route to take, I think about design elements that make the job go more smoothly and the piece look better when it's done. Knockdown hardware makes strong connections between cabinet parts, but it can be difficult to make two surfaces align perfectly along the length of a joint. To solve this problem, I sometimes add a spacer between cabinets and set it back slightly from the edge. This creates a shadow line at the joint and makes the seam less obvious. For the same reason, it's usually better to offset one hard surface from another, like the seam where a bed rail joins the corner post.

No matter how you decide to break a job into smaller pieces, the trick is putting it all together so it looks like a unified whole. And that's where the hardware shown on this and the facing page comes in.  $\Box$ 

#### Knockdown fasteners for small components

Knockdown hardware offers the strength and durability of more permanent fasteners but allows a cabinet to be taken apart and moved as easily as it was assembled. There are many types of knockdown, or ready-to-assemble, hardware. Here are the author's favorites.



*Hex-drive connector bolts and threaded inserts fasten cabinet parts together where connector heads can be exposed. The connector at right secures a cabinet carcase to its base.* 





*Hex-drive connector bolts and threaded sleeves*—*This hardware is ideal for linking adjoining carcases.* 



**Hex-drive connector bolts:** These are bolts with a machine thread, usually <sup>1</sup>/<sub>4</sub>-20, and large, flat heads that you tighten with an Allen wrench (see the top photos above). I team them up with threaded inserts for right-angle joints, shelves and dividers (for more on threaded inserts, see *FWW* #120, pp. 79-81). I also use the inserts to attach crown and base assemblies to cabinet cases.

These bolts also come with matching threaded sleeves. I use them for fastening the sides of two cabinet carcases to one another (see the bottom photos above). The standard finish is an antique bronze color. But you can also buy these bolts in black, or you can spray paint them any color that you like. A number of suppliers sell these bolts and sleeves. I usually buy mine at either Woodcraft (800-225-1153) or Liberty Hardware (800-542-3789).

Niall Barrett owns and operates Avalon Studios, a custom cabinetmaking shop in Narrowsburg, N.Y.





*Lamello Simplex fasteners* are one option when hardware must be hidden. These are ideal for attaching a finished face piece to a cabinet side (right).

**Lamello Simplex KD fasteners:** These fasteners come as interlocking aluminum parts to be glued into regular biscuit slots. They are used in pairs. I often use this hardware to join flat pieces edge to edge and at 90° angles to one another. The hardware is invisible once installed. I used them to join the finished side panels over the cabinet carcases in the installation shown in the photo at right.

Epoxy glue works best for installation, although I have had some success using polyurethane glue for light applications where the joint is not under much stress from weight or tension. Lamello makes a tool intended to simplify installation. I buy the fasteners and the insertion tool from Select Machinery (800-789-2323).





**Confirmat connecting screws:** These connecting screws (see the photos above) have a deep thread with no taper. To use them, you must also buy a special step drill bit for piloting the workpieces, as shown in the photo at right. You can use these screws to put a cabinet together and to take it apart again a number of times with no loss of holding power. You can buy these screws with small heads, designed to be countersunk, or with large, flat heads like those of hex-drive connector bolts. I only use the ones with small heads.

Also, you need a special driver bit called a Pozidrive. It looks a lot like a standard Phillips head, but it fits and grabs better in the head of the screw. A Phillips bit will strip the head of the screw if you drive it home with a lot of torque. Outwater Hardware (800-631-0342) sells the screws and bits. *–N.B.* 

