

A Look at Kit Furniture

Is this really woodworking?

by Jim Cummins



If you want some furniture in a hurry, kits are hard to beat. Everything in the photo above was put together and brought to whatever

Is it cheating to build a piece of furniture from a kit? Maybe it is if you have a complete home workshop, but how about somebody without one, who has no other way to find out what making furniture is like? How about somebody whose main interest is finishing? How about somebody who just wants a hobby, and one that can pay for itself at that? Kits, in their almost bewildering variety, can completely satisfy the woodworking urge for a lot of people, and have whetted the appetites of many novices to go on to more ambitious projects.

Clocks are popular as kits because they have so many difficult-to-make parts, but the clock field is too large to encompass in a magazine article. So I concentrated on kit furniture instead, ordering kits from more than a dozen manufacturers. Frankly, I found a couple of the projects tedious work that resulted in furniture I didn't much like. But others were not only fun, they were a challenge. I was surprised to find that I needed my table-saw, jointer, bandsaw, lathe, router, and just about every hand tool I owned to get a couple of pieces done the way I wanted.

Kits are a compromise between the manufacturer and the kit builder. The manufacturer invests in the heavy machinery, benefits from bulk lumber prices, and does the trickier operations such as steambending, dovetailing, doweling, shaping and turning. The kit builder provides the hand-fitting and finishing labor,

and hopes to reap substantial savings in exchange. The manufacturer governs the level of the first part of the compromise, and must decide what the customer will be satisfied with. American Forest Products, for example, sells a \$60 three drawer-chest kit, and Bartley sells a \$990 blockfront bureau. Both of these, as well as the other kit furniture I built, are shown in the photo above. Obviously, it's not enough to say that you get more from Bartley. The real question is, what level do you want to aim for?

I'll concentrate on the pieces I found most interesting to a woodworker, and talk briefly about the others in the box on p. 79. I'll try to discern each manufacturer's concerns and compromises regarding quality, and I'll talk about the amount of work and skill each company expects from the customer. The prices listed are retail, ignoring any seasonal sales the manufacturer may regularly have. Some companies include finishing materials and postage in the price, and some don't—something you'll have to figure out by studying the catalogs.

Shaker Workshops (Box 1028, Concord, Mass. 01742) sells a number of maple rockers, settees and chairs. The \$70 youth chair I built is typical. In addition they have woven-seat footstools, candlestands, dining tables and a bed, all notable for their unmistakable Shaker lines. My kit arrived in a long, flat box, and in

Photo key: 1. Cohasset's butterfly table (modified). 2. Windsor Classics' lowboy. 3. Emperor Clock's butlers' table parts. 4. Cohasset's Windsor armchair. 5. Shaker Workshops' youth chair. 6. Colonial Woodcraft's writing desk. 7. Williamsburg's candlestand. 8. Bartley's brandy stand. 9. Bartley's blockfront bureau. 10. Assorted finishing supplies. 11. American Forest Products' three-drawer chest.



degree of finish it shows in about eight weekends.

about fifteen minutes I had it dry-assembled. The back, which must be just right or the other parts won't fit, came preassembled and glued. Putting the rest of the chair together consisted of fitting round tenons into round holes, then adding the arms. A couple of the spindles were pretty snug, but all were within reasonable tolerances for a good joint. Also in the box were seat tape and padding, tacks, sandpaper, and good directions.

The instructions advised that I double-check all the parts before applying any glue, and I'm glad I did. Two of the seat rails were $\frac{1}{2}$ in. too long, which prevented the tenons at the back of the arms from seating fully in their mortises. Shaker Workshops—and every other kit manufacturer—is willing to exchange faulty parts without question, but the expense of doing so and the loss of customer confidence makes such errors a potential nightmare for them. For me, it was no big deal. I just turned new rails and adjusted their length until everything fit.

Such a mishap, however, isn't liable to happen very often, and mine turned out to be a special case. Shaker Workshops' director, Richard Dabrowski, had gone to the warehouse himself to pack up my chair and had inadvertently pulled the seat rails from the wrong rack. His foreman suspected the problem soon after shipment, and had advised his boss to warn me. Dabrowski laughed: "He also told me to please stay out of the warehouse."

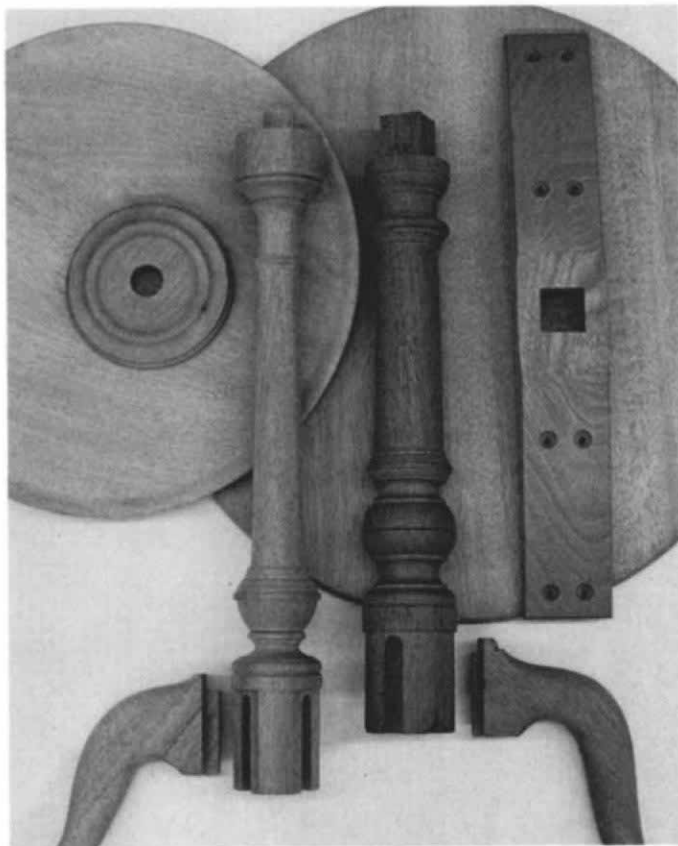
I finished the chair with Shaker Workshops' medium-maple stain. Weaving the herringbone-pattern seat was fun, took about an hour, and has inspired me to redo some old chairs of my own. I'd say the company gives excellent value.

Windsor Classics (15937 Washington St., Gurnee, Ill. 60031) sells full kits, and also separate parts such as cabriole legs in a variety of styles and sizes. Their cherry Queen Anne lowboy provided me with some noteworthy experiences.

All of the tenons were cut oversize, and required about seven strokes of a rabbet plane to make them fit. This, to me, was a definite plus, because I could fit each joint to my own satisfaction. For a non-woodworker, however, it would have meant much tedious work with sandpaper.

Dry-assembling this piece was absolutely necessary. Not only did I find a few places where the machining was off, such as a too-shallow drawer runner and various out-of-line shoulder depths, but they had actually shipped me two left front legs instead of the required left and right. I'd been fixing the minor misfits as I went along, but the leg posed a problem: Should I ask the factory for a replacement, or fix it myself?

I'd already gotten so far along that I didn't want to send the whole kit back. Besides, I'd been enjoying the work. The low-



Some reasons why Williamsburg's candlestand (on the right) costs almost twice the price of Bartley's: a large one-piece top, a heavier pedestal, and more detailed joinery. The stands are shown set up on p. 77.

boy, assembled with its mismatched legs, had a sly charm, as if it were about to tiptoe off my workbench. I grinned, then recut the joints in about an hour. The only part that will show in the end will be a mysterious dovetail on the outside of one corner post, and if anybody ever notices it—and only a woodworker would—I'll use the occasion to share a funny story.

The lowboy had only one serious flaw. There was little understanding of wood movement, and the provisions to allow for it were insufficient. I found this generally true of the other kit manufacturers as well, probably because wood movement wasn't a serious problem in Colonial homes, and the period pieces that many kits copy didn't allow for it. But Windsor compounds the problem with outright bad advice for gluing the long mortise-and-tenon joint between the back and the legs. The instructions said to glue the joint at the top and bottom, which would have prevented the back from shrinking, and would probably have caused it to crack shortly after the heat came on in my living room.

I was growing very fond of my lowboy by this time, and I modified the long cross-grain joint with pegs and slotted the top batten's screw holes to allow the piece to take a 20th-century winter in stride. As a final bit of hand-tool work, I trued up the molding shape on the edge of the top, where the worker at the factory had lifted his router a little too early, and I redrilled the dowel holes where the pendants are attached—they were not only both too small, but the dowels were of different diameters.

The lowboy kit retails for about \$600, but with due caution you can end up with a real piece of furniture. I'd recommend the experience to anybody with a sharp plane, a sharp eye, and the ready cash. A sense of humor wouldn't hurt, either.

The Bartley Collection (121 Shelter Rd., Prairie View, Ill. 60069) has an exceptional reputation, and is the company most competitors are chasing. Some of their furniture is adapted from original antiques in the Henry Ford Museum in Dearborn, Mich. Their lowboy, judging from the catalog photos, has crisper turnings than Windsor Classics', a more serpentine leg (though I like Windsor's better), and an honest thumbnail-molded top edge instead of Windsor's stock-router-bit ovolo. Aiming high costs money, and Bartley's lowboy kit sells for \$845. They sell the same piece finished for \$1690, evidence that their finished pieces can compete with furniture companies like Harden and Kittinger.

I didn't want to build two lowboys, so I ordered Bartley's \$990 blockfront bureau instead. It was the last piece I made. Everything went together in about seven hours, and so perfectly that I lost the feeling that I was working with wood. Each drawer front was a single, blemish-free mahogany board. The grain in the top had been carefully matched at the factory. The joints were practically airtight, and required no fitting work. The only modification I made was to slot the screw holes at the back of the drawer runners to allow for seasonal movement.

Bartley's blockfront is the epitome of kit furniture. It is solid and enduring, and there is no way I would ever have been able to make it myself for the price, even if I counted my time at a paltry wage. No doubt somebody in my family will be keeping sweaters in its drawers long after I have gone. Still, it's hard for me to work up much enthusiasm about building it. I guess I'm not a true kit builder at heart—I'd rather run into a little trouble and have the fun of sorting through it. But I would recommend Bartley to those who have never built any furniture on their own.

Colonial Williamsburg (Box CH, Williamsburg, Va. 23187) recently started a line of kits to supplement their selection of finished furniture. Their kits are at the top of the price chart. Their mahogany candlestand is \$219, and they sell the same piece finished for a lofty \$619. This, presumably, means I would "save" \$400 by doing-it-myself. Well, I doubt it.

Williamsburg is out to beat Bartley's similar table, which sells for \$125. The photo at left shows some differences in the leg joints and the heftiness of the pedestals. In addition, Bartley's top is made from three edge-joined pieces, while Williamsburg's is from one board, and larger. Williamsburg supports the top with a square tenon and a long batten (with no provision for wood movement), while Bartley uses a round tenon and pad. I can see where the extra cost comes from, though I'm not sure it's worth it. Both tables are shown assembled, but not finished, in the photo on p. 77.

Williamsburg represents the kit as being historically accurate in wood, joinery and finishing materials—a sort of mini history lesson about Colonial times. They even advertise an optional shellac finish to duplicate the original's French polish. This turned out to be mostly hype. The shellac finish did arrive in flake form, with a separate alcohol solvent, but the directions were to brush on three coats, then to follow with steel wool—not French polishing by a long shot. The wood is Honduras mahogany. The joints were machine-cut, and airtight, though there was a little chipout around the edges of the legs.

By placing themselves at the top of the price chart, a place Bartley used to occupy, Williamsburg implicitly claims to set the highest standards. That claim invites no-holds-barred criticism. Their candlestand is truly well made. But one thing going against it is its unambitious design. Compared with many original pieces, its half-round table edge and plain flat top are bland

and undistinguished. The legs, though pleasing, are more upright and perky than the period examples I've seen, which have more sweep and flow. And the pedestal turning, finely finished as it is, misses out on the crisp detail of the originals—it even substitutes a V-groove for the usual delicate raised ring, the master's touch that graces so many period pieces.

Judged for honest value, head-to-head with comparable products from other kit companies, I'd have to say that Williamsburg is too high-priced for me, but keep in mind that that's probably intentional. This is the luxury market—if you have to ask how much it costs, you can't afford it.

Colonial Woodcraft (11229 Reading Rd., Cincinnati, Ohio 45241) is skimpy with instructions, although these did turn out to be adequate. "Emily's writing desk," \$300, arrived without even a picture of the piece I was supposed to be building, just a list of parts and sizes and a few hints as to when to glue what where.

Most of the cherry had been glued up from narrow pieces, but the grain matched fairly well throughout. By and large, the pieces were well machined, with minor flaws filled and sanded by the factory, at least on the show sides. But one of the legs had an unfortunate wormhole right on the outside corner near the top, and the factory-drilled dowel holes prevented me from simply turning the defect to the inside.

The manufacturer had kept the price down by making a few compromises, and I'd say the result hit the middle ground squarely. The wood is good, but not great (two of the legs were half sapwood). The machine dovetails were a little off, but did go together—some workman probably saved 15 minutes extra setup time. The larger drawers are supported by nylon glides, which don't demand as much precision as do wooden ones—it's the same system found in most department-store kits. There were similar small savings everywhere, and they added up. This was one of the first pieces I made, and I hadn't yet realized that no kit maker is infallible. I didn't notice that the mortises for the drawer runners had been routed $\frac{1}{4}$ in. too shallow. My drawer fronts bump the runners and don't quite close. I haven't completely finished the desk yet, and will fix the drawers when I do.

Emperor Clock Company (Industrial Park, Fairhope, Ala. 36532) makes mostly clock kits, but they also make some furniture. I ordered their cherry butlers' table. In contrast to the Shaker Workshops' chair I made, it's not aimed at shopless novices, but it's not as ambitious as Colonial Woodcraft's desk, either. The first paragraph of the instructions told me to go out and buy a can of wood filler.

The apron rail is mortised into the legs with $\frac{1}{2}$ -in. long tenons, and reinforced with screwed wooden corner braces. The tenons

KD

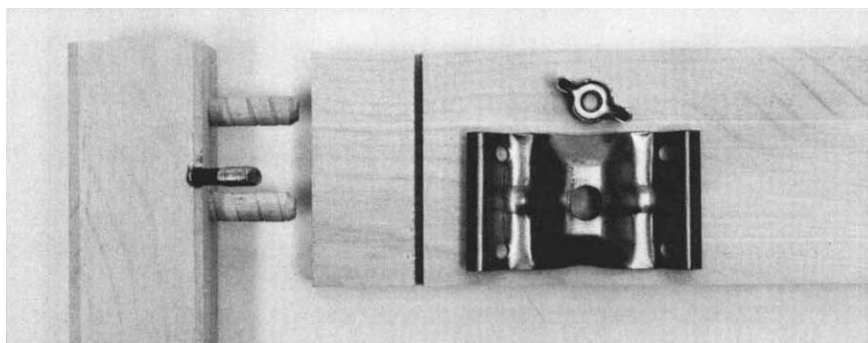
Besides period reproductions, there's a whole other dimension to the kit world, a multimillion-dollar business in knock-down furniture, called KD for short. These pieces require the bare minimum in assembly skills. Here are some of the major manufacturers:

The Bombay Company (Box 79186, Port Worth, Tex. 76179) buys Philippine mahogany and ramin at the source, ships it to their Taiwan factories, and boxes up completely finished KD furniture—all the gluing, staining and lacquering is done overseas. They sell by mail, and also have about 30 retail stores.

Bombay's hardware is excellent, but the furniture itself seems fragile stuff—four or five pieces in the showroom I visited had broken joints and cracked drawer fronts. The heavy, semi-opaque finish didn't conceal that many veneers had checked. Prices are simply incredible, though. A recent sale catalog listed a small Pembroke table for \$37 and a candlestand for \$15.

American Forest Products is the largest manufacturer of kits in the country, selling about a half-million last year. They don't sell direct to consumers, but you'll find their products in department stores all over, usually at prices that rival what you'd pay your local lumberyard just for the wood.

I assembled their all-purpose three-



The metal fastener for a pine butlers' table from Yield House.

drawer chest, which retails for about \$60. The interlocking joints are glued and nailed, and the whole job took about $2\frac{1}{2}$ hours. For the money, you get what you'd expect: randomly knotty pine, hardboard drawer bottoms, nylon drawer guides, minimal hardware and marginal drawer joinery.

Yield House (Dept. 9300, North Conway, N.H. 03860) has an extensive line of raw-wood and prefinished pieces, most in pine with a few available in oak as well. In addition to selling by mail-order, they have 14 retail stores in the Northeast. I visited a showroom and I also ordered their \$70 butlers' table.

Well, I'd recently made myself a pine butlers' table from scratch and I didn't find Yield House's much to my liking. The wood was run-of-the-mill white pine, not as nice as what I'd been able to select for my own version. Edges were

sharp, even the handgrips, and would have called for a lot of hand-sanding to make them comfortable. The legs were reinforced with unsavory metal plates and screws. Yield House sacrificed considerable quality to save the consumer a few dollars, and in my case they missed the boat. Their prefinished version of the same table, which costs only \$20 more, is a better buy.

I'd been tempted by a set of barristers' bookshelves—12 cabinets, either glass-fronted or file-drawer, that nest atop each other in various combinations. At \$559, the set seemed a bargain, but after examining it in the showroom, I decided to build my own instead. It will probably cost me more than the kit, but in preparing this article I've come to one overriding, and somewhat surprising, conclusion: There are no tricks. You do get what you pay for. —J. C.



Cohasset Colonial's standard butterfly table has upright legs and a butt leaf-joint. The author's version, which incorporates a few modifications, is shown in the photo on p. 76.

were much too loose for my liking. I could assemble one joint with a 0.031 feeler gauge in it.

As on the Colonial Woodcraft desk, the cherry pieces are glued up from random-width lumber, ranging from 6 in. wide down to about $\frac{3}{4}$ in. The factory had taken some care to keep any sapwood mostly to the inside, and there were no unsightly knots.

I didn't build this table. But in looking it over, and examining the other designs in the catalog, I'd say that Emperor, like Colonial Woodcraft, is aiming squarely at the middle of the road. A woodworker could assemble a kit from either company and end up with good value for the dollar. My biggest complaint is with the designs themselves. Colonial Woodcraft's are late Victorian, not my favorite, and Emperor's period pieces are unabashedly compromised—there's a standard Queen Anne leg that crops up from piece to piece, for example, whether it looks right or not.

Such compromises add up in "savings" and detract in "quality." The factory takes a gamble as to what balance point the buyer will want. For example, Emperor has a Queen Anne lowboy for \$270. Windsor Classics' lowboy looks better, but it sells for more than twice the price.

Oak rolltop desks are popular kits, and I did find two companies that make them, although for various reasons I didn't build a kit from either. **Craftsman's Corner** (4012 NE 14th St., Box AP, Des Moines, Iowa 50302) has a rolltop for \$699, and office chairs, bookcases and file cabinets to match. I came upon them too late to order a piece, but I did read a set of their instructions, which were better than average. **The Shop** (Box 311, RD 3, Reading, Pa. 19606) sells oak reproductions of Pennsylvania Dutch and turn-of-the-century pieces—including an antique icebox for \$359. They use the same joinery as on the originals, but their more complicated pieces are mostly preassembled at the factory to ensure squareness (the reason I didn't get around to "making" the icebox I ordered). They also sell blueprint plans and authentic hardware for those who want to work from scratch.

Cohasset Colonials (30 Parker Ave., Cohasset, Mass. 02025) was founded in 1947, making it the oldest kit-furniture company in the country (see box, facing page). Cohasset's furniture is clean and simple—some Shaker pieces, handsome Windsor chairs, beds, tables and so on, most of which are modeled after actual antiques that strike owner John Hagerty's fancy. He has an unerring eye for compatible rural designs in pine and maple. I had wanted to build their four-drawer chest, but Hagerty persuaded me otherwise. "It's just a piece of furniture," he said. "Your readers know all about chests of drawers already. Let me show you something they'll get a kick out of instead." He sold me a \$165 bowback Windsor armchair.

He told me that it had taken him three years to get the bugs out of bending the tapered bow. Well, he has a little way to go yet. On my chair, there were short bend-cracks at two of the spindle holes, and, as you would expect, the whole bow was extremely fragile because of the many holes through it. During assembly, my bow cracked some more, not along the top radius of the bend, but at the back. Nevertheless, it glued up well, seems sturdy enough, and has become my favorite dining chair. Period Windsores were made of three different woods, each with its advantage for the specific job; a pine seat, maple undercarriage and spindles, and hickory bow were typical. Cohasset's pigmented stain does an excellent job of blending these woods together.

Cohasset's chairs have one particularly ingenious feature—the round tenons are compressed at the factory, which makes it easy to fit the parts without pounding. At glue-up, you briefly dip the tenons in water, which causes them to swell up tight in the joint. It's the factory equivalent of the old chairmakers' dry-rung/wet-post trick. The through tenons are wedged as well, for even more security. The chair is more stylish and nicely made than those I saw in competitors' catalogs. But if I ever make another, I'll soak the bow in a hot bathtub for a while first.

Kit-busting is a modelmaker's term. I first heard it from a young friend who collected model horses. She'd buy a horse kit—a body blank, mane, tail, tack, and horse-colored paint—but she'd make an entirely different horse than the directions suggested. Scale furnituremakers do the same thing, so why not me?

I decided to bust Cohasset's maple-and-pine butterfly table, which is shown in standard version in the photo above. The table has legs that splay out in end view, but they don't splay in front view. I splayed mine, making two new stretchers and aprons from pine. While I was at it, I made a new end apron and put a pine drawer in it, with a little maple knob.

I noticed that somebody at the factory had shipped me rule-joint hinges instead of the flat ones that should have come with the kit, so I busted the kit again by routing a rule joint on some spare maple and splicing it on.

I doubt that Hagerty will take offense at my handiwork, but I don't expect that he'll incorporate any of my changes into his design, either. For one thing, his version matches some good period examples just as it is, and my changes would push the price up without adding significant appeal. In fact, for me, I wouldn't want Cohasset to change a thing. I like sawdust, and thrive on having some room to work things out for myself. □

Jim Cummins is an associate editor at FWW. For additional reading, The Kit Furniture Book by Linda Graham Barber (Pantheon, New York, 1982) is like a master catalog of various companies, with hundreds of photos. Watch out, though—some firms have gone out of business.