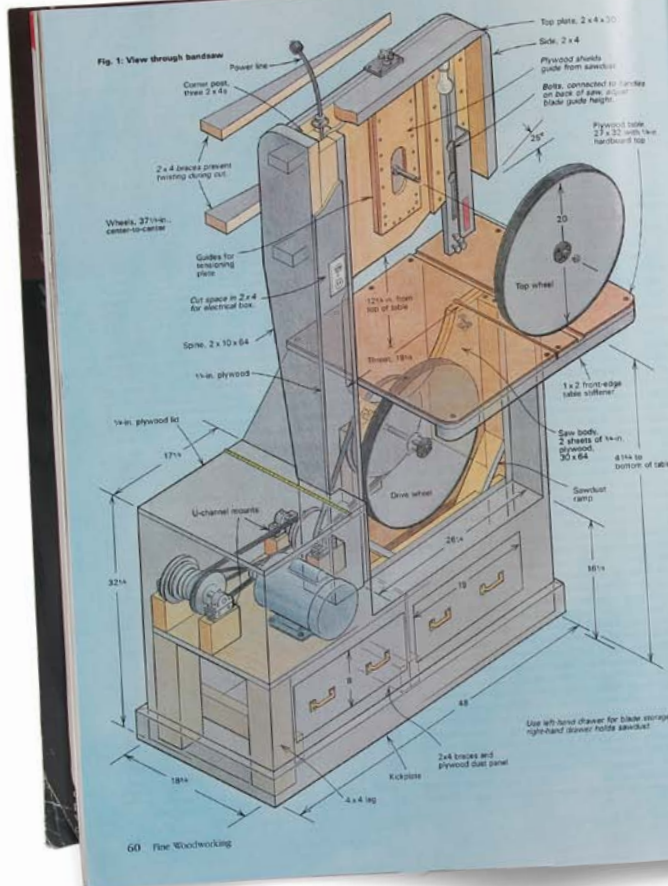


The era of manmade machines

A GENERATION OF WOODWORKERS OVERCAME THE HIGH COST OF MACHINERY BY BUILDING THEIR OWN



Shopmade Bandsaw Plywood and basic tools build the saw

by William Corneil

Shopmade Bandsaw

WILLIAM CORNEIL, ISSUE #65, 1987

Most woodworkers' thoughts in any saw when they're confronted with a stationary saw. But I'm different. I opted to build the machine I chose a bandsaw because it can do what a tablesaw can't. As a pro, I'm building a tablesaw or lathe is great to own, but my own expenses are too high. As an amateur woodworker, I can't afford it. My spouse and I the equipment simply to "build better" cutting tasks are performed quickly and accurately. time doesn't mean money. It can mean up and even cut lumber in the blade speeds: 120, 300, 600, 1,200 (rpm). The slowest speed allows me to cut curves. As a pro, I'm building a tablesaw or lathe is great to own, but my own expenses are too high. As an amateur woodworker, I can't afford it. My spouse and I the equipment simply to "build better" cutting tasks are performed quickly and accurately. time doesn't mean money. It can mean up and even cut lumber in the blade speeds: 120, 300, 600, 1,200 (rpm). The slowest speed allows me to cut curves. As a pro, I'm building a tablesaw or lathe is great to own, but my own expenses are too high. As an amateur woodworker, I can't afford it. My spouse and I the equipment simply to "build better" cutting tasks are performed quickly and accurately. time doesn't mean money. It can mean up and even cut lumber in the blade speeds: 120, 300, 600, 1,200 (rpm). The slowest speed allows me to cut curves.

"I chose a bandsaw because it can do many things a tablesaw can do, plus it can cut curves. As machinery goes, the price was right. I built the 20-in. saw for under \$100, Canadian. My saw incorporates features that many store-bought saws don't, such as a worklight above the blade guard, one drawer for blade storage and another to catch sawdust, a built-in power outlet, and a conveniently located power cord. I built it with the usual cast of characters: a saber saw, an electric hand drill, a borrowed belt sander, and my homemade 12-in. disk sander."



Online Extra

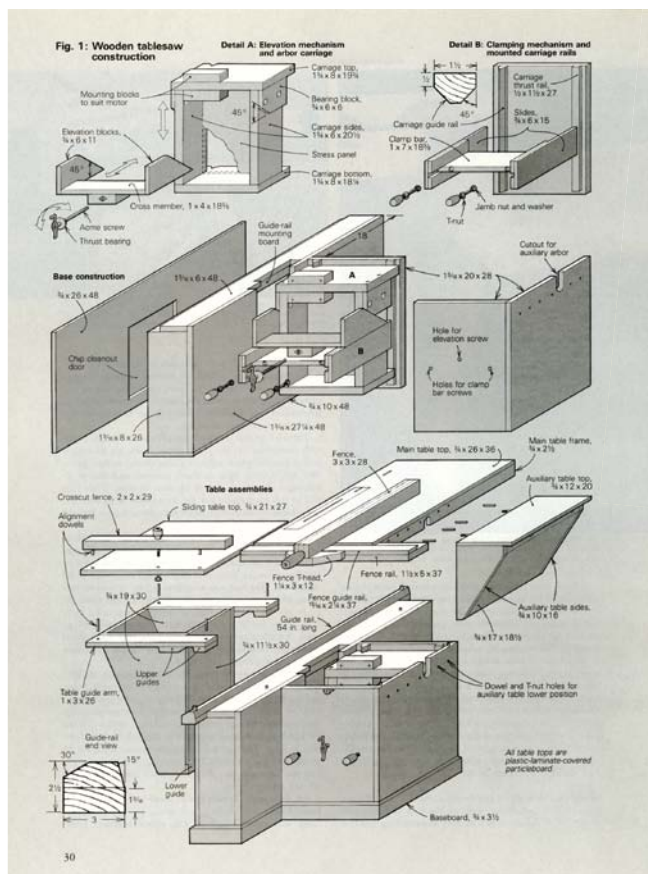
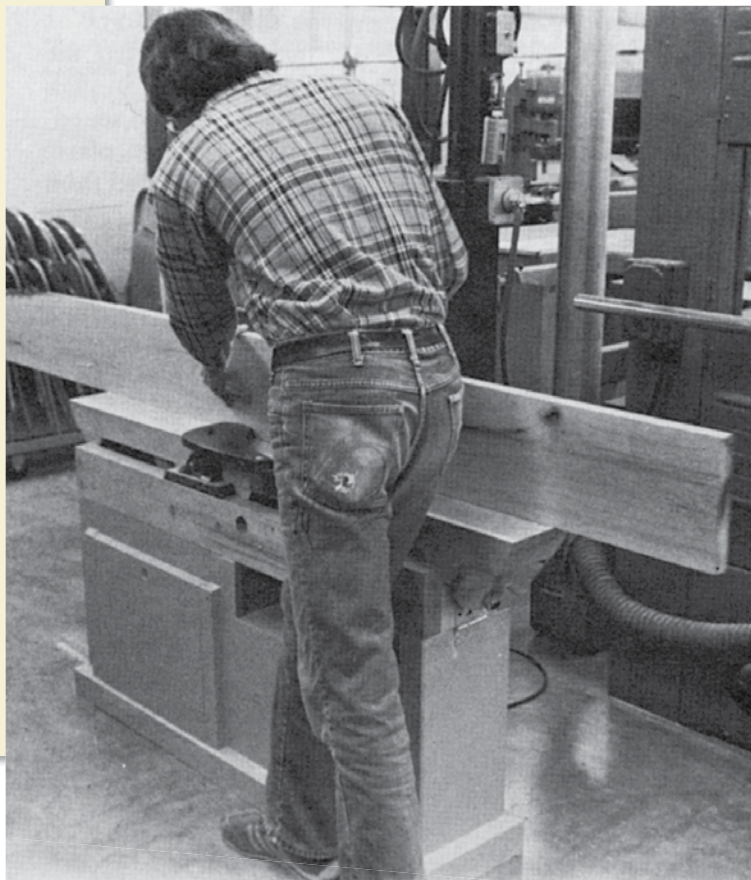
To read each of these articles in their entirety, for free, go to FineWoodworking.com/40years.

When it comes to outfitting our shops, today's woodworkers have a lot of affordable machinery options. But that wasn't always the case. Before amateur DIY and woodworking went relatively mainstream, woodworking machinery manufacturers served primarily a pro audience, which meant that prices often were out of reach for many hobbyists, and availability was limited. The solution for some woodworkers was to build their own machines. *Fine Woodworking* published a number of project articles from these enterprising woodworkers, who created astounding, functional machines from hardwoods, sheet goods, spare parts, and used motors.

This issue's Looking Back highlights a few of those shopmade successes, with short excerpts from each article, explaining why or how each machine was made. One of the projects, the bandsaw above, offered plans for sale, and we still occasionally get requests for them. Another, the lathe on p. 86, actually graced our front cover.

—Tom McKenna, editor

GALEN WINCHIP, ISSUE #28, 1981



GALEN WINCHIP, ISSUE #41, 1983

“The only way I’d own a sliding tablesaw was if I designed and built one myself out of wood. I had already constructed a half-dozen wooden machines. Like a vintage wooden handplane, they have the friendly feel that’s absent from their cast-iron counterparts. You can modify the saw to suit your needs. After I’d built my saw, alternatives and modifications kept coming to mind, and because I’ve included these changes in the drawings, the photos and drawings don’t correspond exactly.”

Shopmade Lathes

CARLYLE LYNCH, ISSUE #57, 1986

"I designed and built this lathe to turn everything from chessmen and chair rungs to tall bedposts. The materials cost \$179.25 including \$30 for a used ½-hp motor, but not including some scraps of plywood and oak left over from other jobs. The spindles are made from machine steel tubing, which I threaded and reamed to a #2 Morse taper so standard Delta lathe accessories will fit. I finished the lathe with shellac and bolted it to the floor with angle irons, to keep vibration down."

Shopmade Lathes

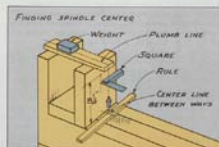
Low-Cost Wooden Longbed

by Carlyle Lynch

I designed and built the lathe to turn everything from chessmen and chair rungs to tall bedposts. The materials cost \$179.25 including \$30 for a used ½-hp motor, but not including some scraps of plywood and oak left over from other jobs. The spindles are made from machine steel tubing, which I threaded and reamed to a #2 Morse taper so standard Delta lathe accessories will fit. I finished the lathe with shellac and bolted it to the floor with angle irons, to keep vibration down."



Wood lathe from column pine turning lathe. Lynch's wooden lathe cost less than \$200 in materials. With its ½-hp. motor, it can handle up to 8 ft. work. A strip of wood, secured to the lathe through drilled holes, secures the workpiece from vibration on the lathe.



Hardware specifications:
 2—One 1 in. diam. 4 ft. long sawyer pole, 3, 4, 5, and 6 in. dia., and one 1/2 in. diam. shaft (Delta Int'l. Brooming, Mfg. Co., P.O. Box 487, Mansfield, N.J. 07930)
 2—1 in. diam. 4 ft. long sawyer pole (Delta Int'l. Brooming, Mfg. Co., P.O. Box 487, Mansfield, N.J. 07930)
 8—12 in. metal (Delta part no. 40-092; Delta lathe parts are available from local Delta dealers or may be ordered by phone from Delta International, 1-800-225-7279.)
 1—6 in. long, 1 in. 4 in. metal (Delta part no. 40-092)
 1—4 in. long, 1 in. 4 in. metal (Delta part no. 40-092)
 1—Cap screw #2 M.T. (Delta part no. 40-092)
 1—Bolt lock, 1/2 in. by 1 in. 4 in. machine steel tubing
 1—Lathe spindle, 1/2 in. by 1 in. 4 in. machine steel tubing

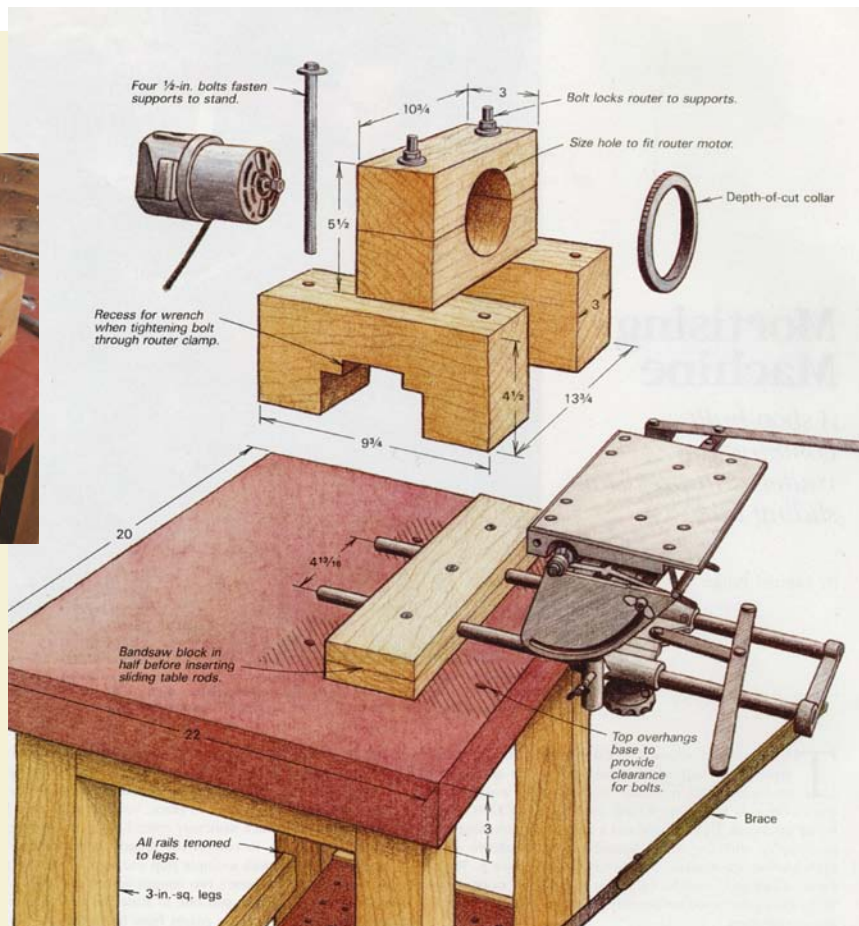
March/April 1986 45

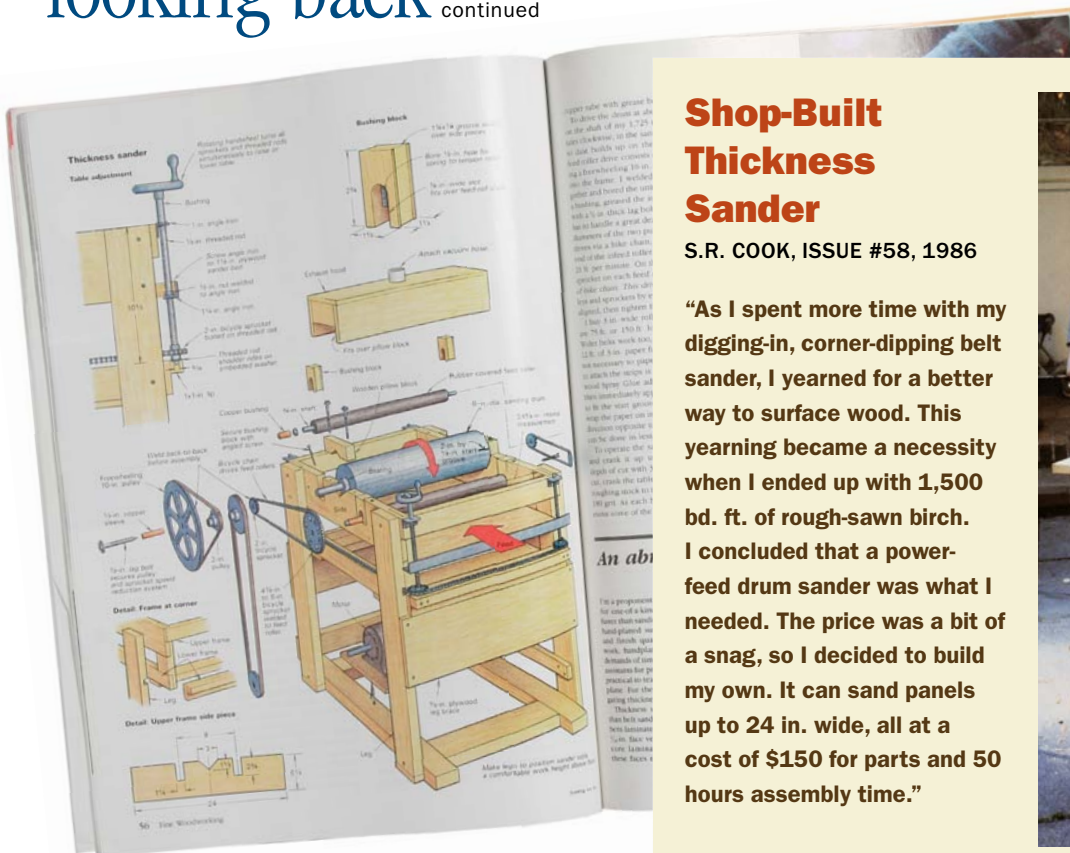
Mortising Machine

SAMUEL BUTLER, ISSUE #60, 1986



"The speed and accuracy of a horizontal milling machine make it an important mortising tool for anyone who builds a lot of furniture. Commercially available machines cost more than \$2,000, but for about \$270 I combined my Bosch 2¼ hp router and a stock Inca mortising table to come up with the sturdy home-built model shown here. The table can move back and forth enough to make a 4-in.-long mortise and up and down enough to cut a 2½-in.-wide mortise."





Shop-Built Thickness Sander

S.R. COOK, ISSUE #58, 1986

"As I spent more time with my digging-in, corner-dipping belt sander, I yearned for a better way to surface wood. This yearning became a necessity when I ended up with 1,500 bd. ft. of rough-sawn birch. I concluded that a power-feed drum sander was what I needed. The price was a bit of a snag, so I decided to build my own. It can sand panels up to 24 in. wide, all at a cost of \$150 for parts and 50 hours assembly time."



Shopmade Scroll Saw

MARK WHITE, ISSUE #70, 1988

"My saw performs as well as any of the factory-made machines I've tried. I made it as simple as possible. It consists of two parallel wooden arms mounted on a rigid wooden frame and kept in tension by the blade at one end and a stout nylon cord at the other end. The blade is driven by a pair of eccentric, rotating weights attached to the lower arm with a shaft and pillow block. An old clothes-dryer motor drives a section of rubber hose that acts as a flexible shaft to spin the weights."

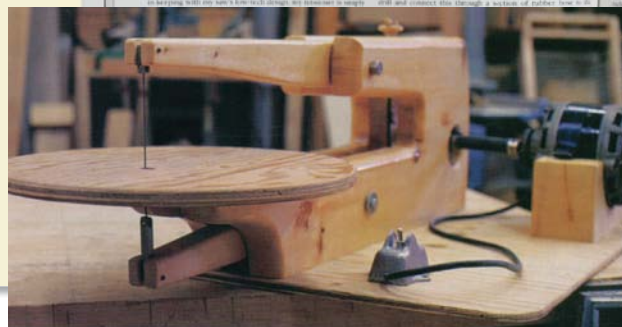
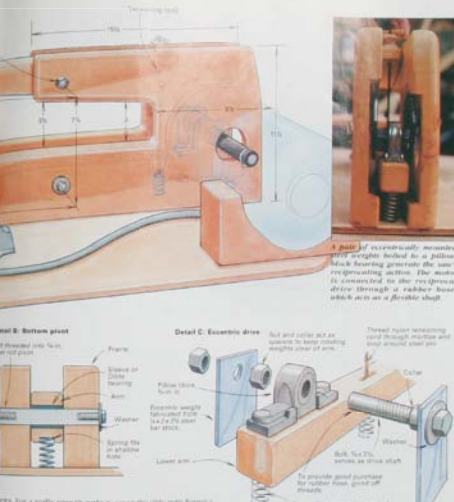
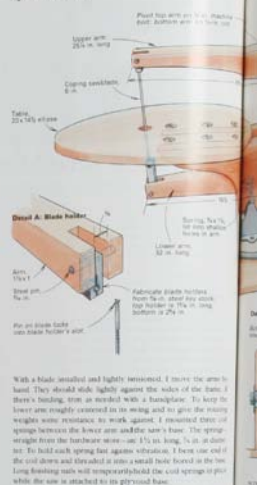


Fig. 1: Scroll saw plan



Sources of supply

Pillow blocks and motors are available locally from Emerson, for a catalog and list of distributors, write: W.C. Emerson, Inc., 1000 W. Second St., St. Louis, Mo. 63104. (314) 647-8000. Rubber hose, 1/2 in. diameter, is available from: H.P. Hulse, 1000 W. Second St., St. Louis, Mo. 63104. (314) 647-8000. Key and for stock is available from: Metal Box, 1000 W. Second St., St. Louis, Mo. 63104. (314) 647-8000.

