# shop design

# A shop in the village

BY THOMAS THROOP

v vision for a workshop has been constant throughout my career as a furniture maker. Since arriving back in the States in 1993 from my training at the Makepeace school in Dorset, England, I always imagined having a solo shop on the edge of a village, within walking distance of a café or pub, in a location that would allow me and my business to be knit into the local community.

It was only after a decade working in a series of shared industrial spaces that I found a place to fulfill that long-held vision. What surprised me was that the right building, a snug,

sunny space on the edge of a vibrant small town, and just a two-minute walk from excellent sandwich and coffee shops, turned out to be in New Canaan, Conn., the very town where I grew up. In fact, in high school I worked for two years in a lamp factory directly across the street but never noticed the building, because it was tucked behind another house.

The shop at 26 Grove St. was built in the late 1940s by a cabinetmaker returning from World War II. His parents lived in the house up front and he took over the barn behind and added onto it. He lived upstairs with his wife and worked downstairs in the shop. When we bought it from his wife's estate in 2006 the shop was nearly empty, but I could tell he had done a lot of laminate work—there were bits of Formica everywhere, used as everything from shims to wall covering.

It turned out the shop was wired with three-phase electricity, a big bonus, since most of my machinery from previous larger shops was three-phase. And the apartment above would provide the opportunity for rental income, an important part of the financial equation.



**Tucked in.** Tom Throop's shop in New Canaan, Conn., is close to the heart of things in town—right next door to the train station and a two-minute walk to restaurants and shops—but set back from the street, nestled behind a residence.

### **Economical shop layout**

The shop's footprint is around 1,200 sq. ft., a third of which is taken up by a small office and a storage area for lumber and plywood. At 800 sq. ft. for machinery and bench space, it is small. To make the most of it, I spread my machines and bench around the periphery, and put my jointer/planer and SawStop tablesaw at the center. This is very efficient, making for just a few steps between machines and bench. The shop has shaped how I work, and for the better. Its small size forces me to put tools back after use, so I rarely have to hunt for anything, and what I use day-to-day is all close at hand.

### The main machines

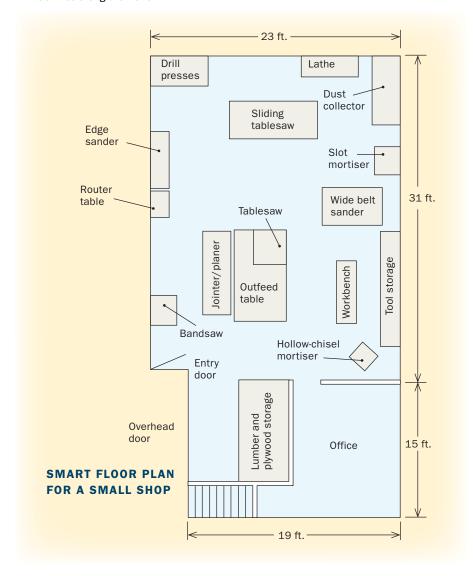
I'm not a tool junkie, but I do like quality and knowing that a tool will work the way that it should every time. A few of my machines were bought new, but most are secondhand, from auctions or private owners. Many are upgrades from the machines I started with; some are second- or third-time upgrades I made as funds allowed. At this point I am pretty much set with what I have and don't foresee many future upgrades. Then again, I do still avidly follow tool auctions.

I primarily make solid wood furniture, and a Felder 20-in. jointer/planer is a centerpiece of the shop and one of the few machines I bought new. I am thankful that I took the leap 20 years ago as it has been a workhorse while maintaining accuracy with minimal adjustment. I have never regretted investing in the 20-in. width and am surprised at how often I max it out.

The other workhorse is a Knapp sliding tablesaw with an 8-ft. stroke. At full extension, it just barely fits between the front and back walls of the shop. I bought it used from a woman in Weehawken, N.J., who bought it when a carpenter she hired to renovate her Victorian house insisted that a large sliding



**An island for organization.** To make the most efficient use of his 800-sq.-ft. machine and bench space, Throop located his SawStop tablesaw and Felder jointer/planer side by side as an island in the middle with walking space around them and arrayed his other machines along the walls.



### LUMBER STORAGE IN A SMALL SHOP





An overhead door right beside Throop's lumber and sheet-goods storage area simplifies getting material into the shop and finished furniture out. An outdoor shed provides snug shelter for shorts and other leftover lumber from previous jobs. Keeping it all well organized makes for easier access.

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### MACHINE WORK



A slider is central. Throop finds his Knapp sliding tablesaw (right), with its 8-ft. stroke, superb for straight-line ripping rough-edged planks and precise, repeatable crosscutting. His predecessor, a cabinetmaker, thoughtfully fitted the shop with enormous windows when he built it in the 1940s. They keep the space bright even on overcast days.



tablesaw would be necessary for the job; he vanished without finishing the renovation, and she put the saw up for sale. I don't use a lot of sheet goods, but I still find it indispensable. It takes a 12-in. blade, and it's excellent for cutting pieces of solid wood square with repeatability, ripping solid stock, straightlining rough boards, and trimming veneers. It also has an integral shaper, handy for tenoning and grooving.

I bought a Felder RL 160 dust collector new when we bought the building. It is relatively quiet, which was important since there would be tenants above, and it has the power to capture dust from the machines with multiple dust gates open.

One unsung hero of my shop is a Powerex scroll compressor. I bought it used from a heart valve manufacturer in Washington state. It is designed to run continuously and is very quiet. And it's oilless, so the air it produces is very clean. It runs my randomorbit sanders, grinding and shaping tools, and vacuum press.

My pair of Rockwell drill presses came from a machine shop that made hydraulic switches for nuclear reactors. The guy had





**Old iron.** A maker of solid-wood furniture, Throop relies extensively on mortise-and-tenon joints. His vintage General hollow-chisel mortiser, with its foot-treadle action, delivers quick, accurate, square-ended mortises in any species. Throop's pair of Rockwell drill presses, bought used from a machine shop that made hydraulic switches for nuclear reactors, see more prosaic duty now, but are still much appreciated, as they let him perform two operations on the same workpiece in quick succession.



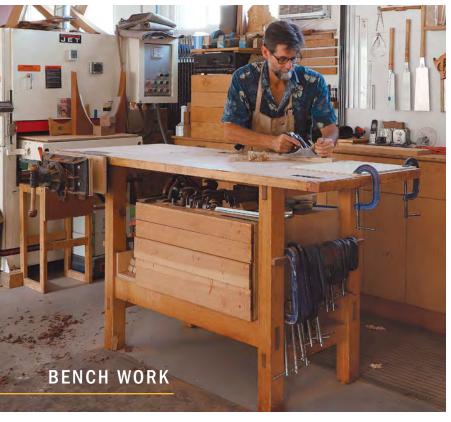








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Old faithful. Built in 1993, when he first opened a shop, Throop's bench features a store-bought maple butcher-block top and legs milled from butternut planks that were a gift from his brother. He made it quickly and cheaply so he could get started making furniture, and it's still going strong. Throop originally fitted his bench with a Record vise, but eventually found an Emmert patternmaker's vise—whose jaws can handle angled workpieces—and replaced the Record.

10 pairs of drill presses arrayed in a circle, each set up for a different boring operation. He sat in the middle on a swivel chair and coasted from press to press doing his machining. I too find side-by-side drill presses very handy. The two share a fence, and I often have a drill bit in one and a countersink in the other, and I'll do the two operations in quick succession.

#### At the bench

The heart of the shop is my bench. Not fancy by any stretch, it was built in the winter of 1993 as I was setting up my first shop. For the top, I ordered butcher block countertop from a lumberyard kitchen center, as I didn't want to spend the time to mill and glue one up myself. The butternut legs came from a tree on my brother's property. He had the tree sawn up and presented me with some of the planks to help me get started.

Most all of my hand tools can be found around the bench. The cabinet beneath holds my measuring tools, chisels, router bits, and all manner of miscellany. My handplanes sit atop the cabinet in easy reach. I hang clamps underneath for quick access but also as ballast to keep the bench in place.

I kept one end of the shop open as a 9x12 assembly area. Pieces migrate there from the bench, either onto the floor or onto a mobile lift table, which lets me work at any height. If I wheel the lift table away, the assembly area can be converted in about 15 minutes into a photography studio with a suspended seamless backdrop and a set of soft box hot lights.

Thomas Throop builds furniture in New Canaan, Conn.



Auxiliary bench at any height. Throop's assembly table, where he also often works on pieces that are nearing completion, is a benchtop attached to a die lift table. By pumping its hydraulic treadle you set its height anywhere from 16 in. to 40 in. Its large casters roll easily and lock securely. Throop added a Record vise to the top so it can serve as a second workbench.