



A Clever Tool Case

Built-in stands keep
an essential tool kit
at the ready

BY YEUNG CHAN

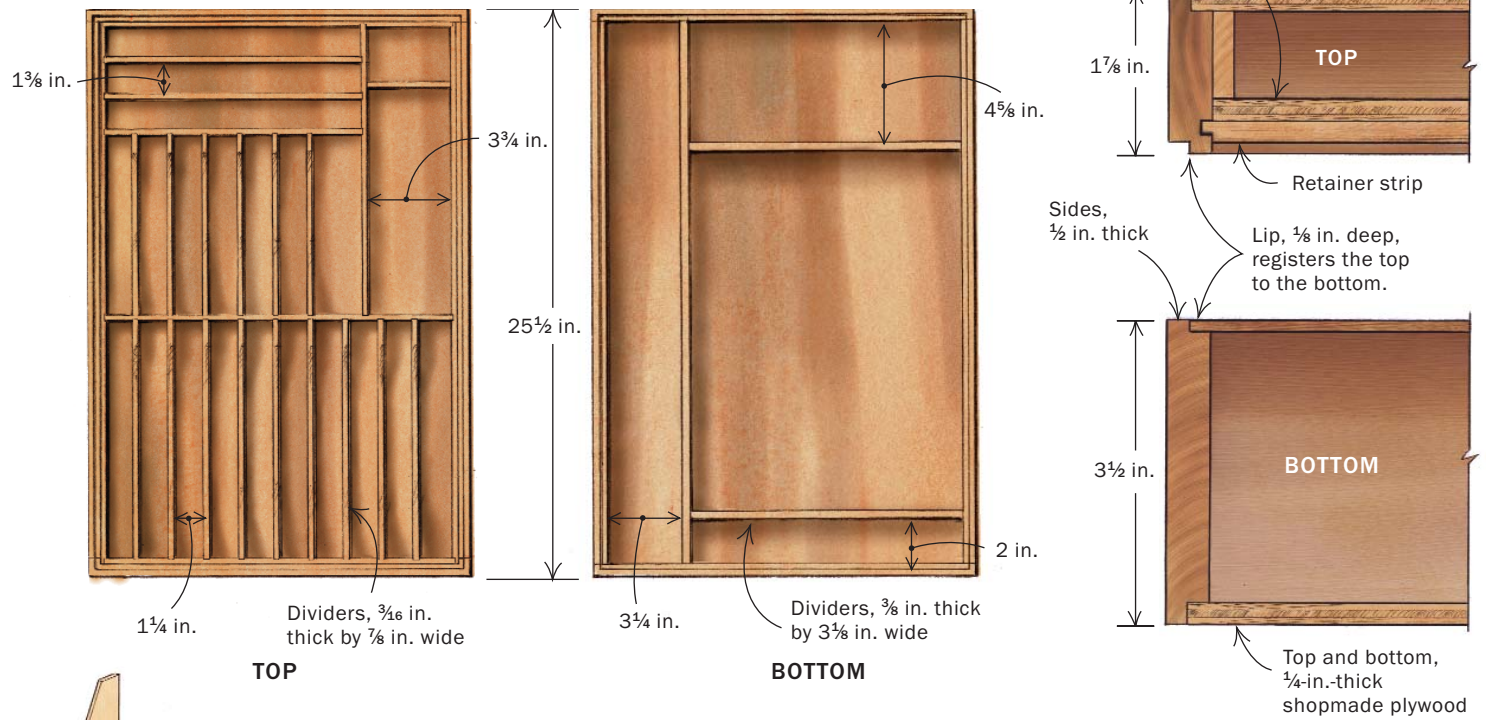
Starting when I was a boy in China, making hand tools became second nature to me. Most of the hand tools I use today are ones I have made. My tools are the extensions of my hands, helping me work faster, safer, and with better results. So I treat them with care, keeping them sharp and well-tuned.

It's not a good idea to store cutting tools in a box without separating each one; tools hitting one another will cause

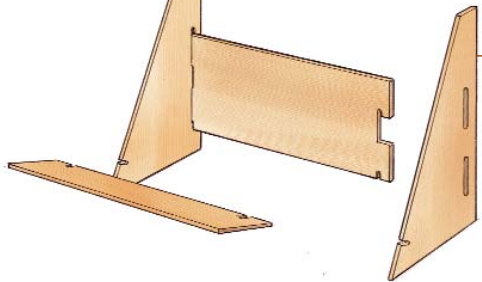
damage and dull the cutting edges. When I went into business as a furniture maker, my first solution for tool storage was a large tool board mounted on the shop wall. However, I soon found that I needed my tools with me when I did installation jobs. And I began to take on a busy teaching schedule, giving classes, seminars, and demos in many different places. It became a big job to remove all of the tools from the tool board and arrange them in

BOX LAYOUT AND CONSTRUCTION

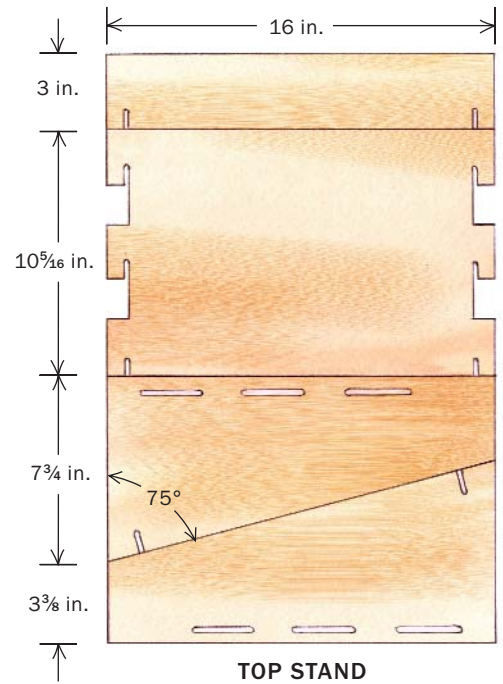
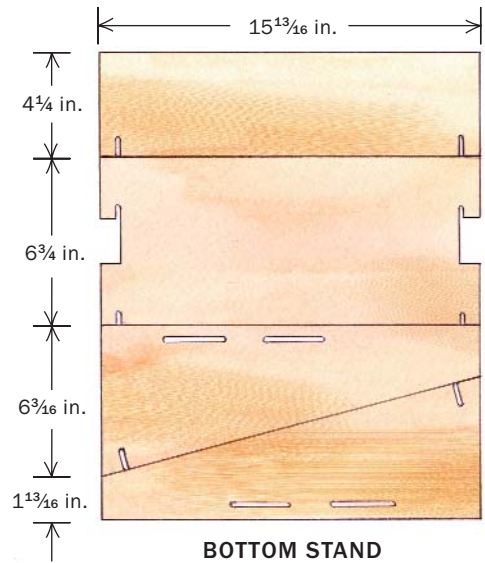
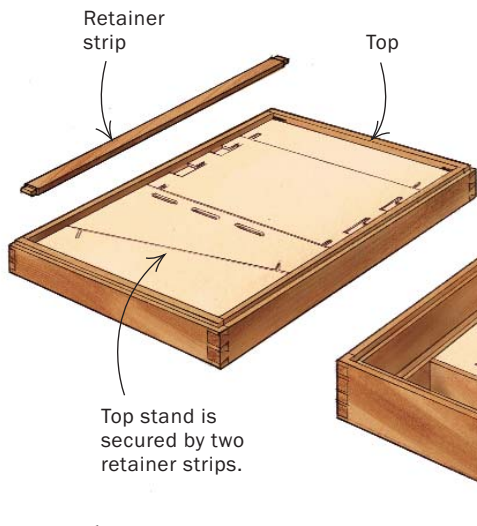
The top section of the box holds chisels, gouges, knives, spokeshaves, and marking gauges. The bottom section holds handplanes, sharpening stones, saws, a hand drill, and a pencil box.



RETAINER PANELS ARE ALSO KNOCKDOWN STANDS



Thin plywood panels fit into each half to keep tools in place. The stand for the top section covers the entire box and is held in place with flexible retainer strips. The stand for the bottom section stacks into the space on top of the handplanes.



Bottom stand stacks inside the handplane compartment.

good order for travel (not to mention putting them all back on the wall afterward).

So I made a toolbox with the following mission in mind: to carry and protect an essential group of hand tools, big enough to handle most situations but not too heavy to carry. My toolbox may be small, but it's efficient.

To keep the tools from tumbling out when the box is closed, I made a retainer panel from ¼-in.-thick Baltic birch

plywood for each half of the box. Originally, I was planning on just a simple rectangle of plywood for each side, but then I had another idea: Cut each rectangle in a certain way, and it could form a knockdown stand for its box. To prevent the plywood parts from falling off when the lid is turned upside down, I use two wood retainer strips with a small tenon on each end. The tenons fit into small mortises on the box wall. The strips are bowed

slightly so that they put pressure on the middle.

I used plywood for the top and bottom of the toolbox, as I usually do for boxes, allowing me to glue it into its rabbet and strengthen the case. To make the plywood, I glued ¼-in.-thick shop-cut veneer onto a ⅝-in.-thick core.

Two straps hold the case together. I decided against hinges because the weight of each box would rip them off the thin walls. Plus, I like having the two

parts separate because I can put them where I need them.

I was very happy that the idea worked perfectly: The tools stay in place when the box is closed, and the two halves stand up side by side, good for use in the shop or in the classroom. When I give seminars and demos, my handmade tool kit becomes an exhibit, always generating lots of interest and questions. □

Yeung Chan is a woodworker and teacher in Millbrae, Calif.

The case for handmade tools

Like many children in poor countries, I made my own toys—model planes, boats, wooden trucks. There weren't many tools around, and in any case, I had no money to buy them. Often the only tool I used was a pocketknife. But I found out in practice that the quality of the steel was poor. Sometime later I found a broken hacksaw blade. I remember thinking that if this saw could cut metal, it must be very hard, good for making a knife. I ground off the saw teeth, sharpened the edge on the sidewalk, and then mounted it in a handle. This hacksaw-blade knife became my first handmade tool, and I was very satisfied with it.

After making this small knife, I made many other tools—for marking, cutting, and carving—all from high-speed-steel sawblades. Over the years I have made many improvements, both in the shapes and sizes of the blades and the handles, not to mention the quality of the tool steel. Now that I have a motorized grinder and fine stones, the grinding process is faster and easier.

Furniture makers often encounter difficult situations that could be solved easily with the right tool. One of the options is to modify an existing tool; a better way is to create and make one that is perfect for the job.

There are many advantages to starting from scratch: You can choose the steel, design the perfect blade shape for the task, and make a custom handle with your favorite wood, contoured to fit your own hand. My wooden spokeshaves are simple in construction with just a body and a blade—

much lighter and smaller than metal ones. I designed my dovetail chisels with a low angle on both sides of the blade to fit into very narrow sockets when fitting fine dovetails. My wooden block plane fits my hand comfortably and is small and lightweight—great for final detail work. And when I could not find a chisel plane that I liked, I made my own out of bronze, which can be adjusted precisely with the turn of a screw. With comfortable handles fitted to my hand, these tools can be used continuously without muscle fatigue.

If you take the plunge and start making your own tools, after some time you will own a collection of beautiful custom tools that suit your hands and your style of work.



Handmade tool collection. Chan designs each of his tools to improve on others he has used and to suit his way of working.