

Rules of Thumb

BY MICHAEL DUNBAR

Vises are a woodworker's third hand

I have watched a lot of frustrated beginning woodworkers attempt to saw a piece of wood while holding it against a workbench with their free hand or their knee. I even saw one diligent guy put a board on a workbench, then sit on the board while he tried to make a cut. Pity that all of them didn't clamp their work in a vise.

Vises are indispensable woodworking tools. Through the day, a woodworker has to hold any number of things, such as parts or tools, so that he can work on them.

Different styles of vises are made for a variety of different purposes. Thus, the longer you work wood, the more likely you are to own more than one vise. I started with one and now have six.

Vises are commonly built into woodworkers' workbenches. A typical joiner's bench has two—a side vise and a tail vise. A side vise is usually mounted along the length of a bench and is generally used for holding boards or parts on their edges. Holding a board for jointing with a handplane is a common job for the side vise. A tail vise—usually mounted on the end of a bench—holds boards or parts flat on the benchtop (see the left photo below). It

is generally used in conjunction with benchdogs. Planing or sanding a board's face and gluing panels are common jobs that involve the tail vise.

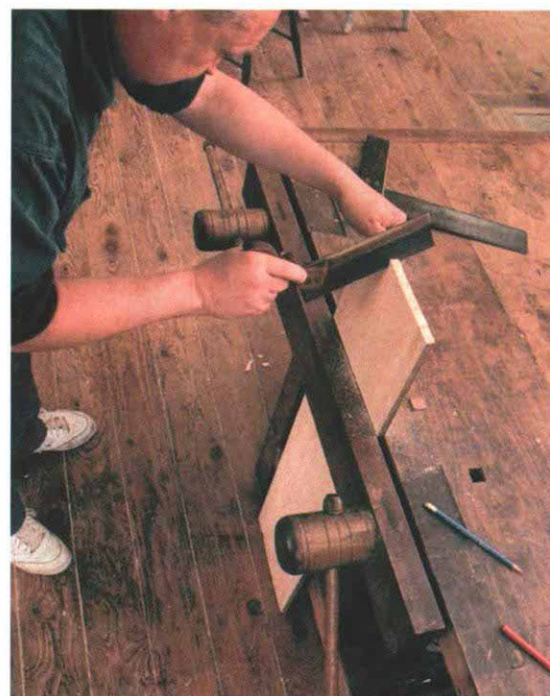
In my chair-making school's shop, we use two other types of vises on a daily basis. My favorite, the carriage vise, is similar to a machinist's vise but is made to much more exacting tolerances. It was manufactured early this century by the Prentise Vise Co. In the company's catalog, this model is listed as a "woodworker's vise," but it is intended more specifically for carriage makers.

The jaws are at chest level (see the right photo on p. 108), making it easier to work in a standing position, which is especially helpful for fine work. The jaws' faces are machined flat so that they do not mar the work, even when it is held very tightly. The screw has very little backlash, so I can tighten and loosen the jaws with a half twist. I have had the Prentise carriage-maker's vise for 27 years. It serves me as a third hand, and without it, I would feel handicapped.

The other type of vise used in our shop is the Record 53E. This model is so well known and so widely used by woodworkers



A tail vise is for working wood flat on the bench. Chopping mortises, face-planing or sanding is easy with a tail vise mounted so that the screw is parallel to the bench's length. The vise clamps the wood against a benchdog, the movable square peg at the front end of the new wood.



A side vise is used for working the end or edge of a board. The author copied the twin-screw vise—great for gripping long boards while working the ends—from an antique bench. Side vises are mounted so that their screws are parallel to the width of a bench.

Rules of Thumb (continued)



Side vises on the end of a bench. For his Windsor-chair-making classes, the author mounted two Record 53E vises on the short end of each bench (left), which allows him to work off the corner of the bench. Working the long edge of a board is easy with tandem-mounted vises.

everywhere that it is the standard add-on cast-iron bench vise.

A once-popular type, pattern-maker's vises were made in large numbers and can still be found (though they're expensive). Pattern makers worked with irregular shapes and frequently needed to revolve the work to place it in an advantageous position. Their vises were far more flexible and complicated than those used by other branches of woodworking. Veritas makes a modern version of a pattern-maker's vise called the Tucker Vise.

Use a vise to your advantage

When I visit other shops or watch students at work, I observe two common problems. Many woodworkers use vises that are inadequate, or they frequently do not use their vises to their best advantage. Whatever type of vise or vises are required in your work, they should all be high quality and strong. (Weak vises are spelled differently.) It is also usually a good bet to buy a brand you recognize. You will not be well served by a lightweight or undersized vise. Acquiring a good vise usually means spending the long dollar. However, the investment will pay dividends for as long as you work wood.

Using a vise to its best advantage is a regular part of our classroom instruction. It is easier to work wood if it is securely held by the vise. But avoid working in a way that allows the part to flex. It is usually best to lower the wood you are working on as far into the vise as possible so that it doesn't project a lot. Try to keep the area you are working as close to the jaws as possible to keep the workpiece rigid.

Smooth operator. This antique Prentise vise (right) has smooth faces that won't mar wood.



It doesn't matter whether the waste or the piece you are keeping gets clamped into the vise—whatever holds better is best. For instance, if you are cutting the waste off the end of a turned spindle, which would be hard to clamp securely because of the turnings, it will be easier to clamp the waste piece in the vise and hold the spindle in your hand as you saw with your other hand. And if you have to joint pieces too small to run across a jointer, clamp a #7 jointer plane upside down in a vise and push the piece over it.

With a little forethought, vises can be adapted to better suit your needs. In our school, we cannot provide each student with several types of vises, so we have mounted Record 53E vises in a versatile way that allows them to perform all the jobs we require, such as holding chair seats for planing, turned legs for drilling or spindles for shaping. Many shops mount a bench vise on the bench's long edge and set it in from the corner. Ours are located on the bench's short end and right on the corner. This allows us to use them as a tail vise for planing. A row of dog holes is aligned with the vise's dog (which is mounted in the outside jaw). And when jointing very long pieces, we can clamp the wood using two vises on the end of a bench.