

Story sticks leave little room for error

If you asked a dozen woodworkers to measure and cut a piece of wood measuring 12 in., you'd likely end up with 12 pieces of slightly varying length. Each time a workpiece is measured and marked, an opportunity for error creeps into the process.

The error factor is an unavoidable aspect of human nature. We're not machines, and each time we repeat a task, the result is likely to be a little different than the time before. A momentary distraction or a tight deadline, and maybe you take a measurement from the wrong side of the piece, read the tape wrong or simply forget a number. This results in a cabinet that doesn't fit into a designated space, a misplaced mortise on a cabinet frame or turned legs that don't match.

The simplest way to ensure uniformity and accuracy is to eliminate some of that measuring, trading the by-the-numbers approach for direct transfer of dimensions. For years, woodworkers have used shop-made gauges called story sticks to create a physical record of a piece, not only improving their accuracy but also saving time.

A story stick is essentially a slender strip of wood (or metal) that holds a series of markings, notches or notations designating the exact locations and profiles of critical elements. The stick can be used to produce multiples or set aside to be reused in the future. The stick saves the time and trouble of re-measuring each time the information is needed, and it virtually eliminates measuring errors.

Story sticks are invaluable for cabinetry

These compact tools are especially useful on job sites, for the layout and installation of architectural woodwork and cabinetry. But story sticks are also used by furniture makers, whether for chairs, turnings or even case pieces.

I was introduced to story sticks as an apprentice working for a trim-carpentry company. When we installed kitchen cabinets and vanities in expensive New York high-rise apartments, we used story sticks to locate cutouts

in the cabinets for electrical, water and waste lines. The contractor wanted these holes located within $\frac{1}{4}$ in. of the pipes, so they had to be dead-on. After establishing a level line around the room, we placed a story stick either against the last-installed cabinet or the corner of the wall and marked the exact horizontal locations of pipes or outlets. Then, working from the same level line, we marked the vertical locations of the pipes on the other side of the stick. Thus we were able to record confidently the locations of the cutouts without suffering the gut-wrenching fear that we might tear a hole through the back of a custom cabinet and be 2 in. off the mark.

Story sticks are also used to lay out entire kitchens. The horizontal and vertical positions of each unit can be planned and recorded on a length of narrow plywood. Aside from the other benefits, a story stick serves as a double-check for blueprint dimensions. Sometimes planning and design errors that were missed on the blueprints are caught when the actual kitchen is laid out on the stick.

A story stick is also useful for the installation of hinges and drawer slides on a cabinet carcass.

The chair maker's story stick

For makers of ladder backs and other post-and-rung chairs, a story stick is indispensable, holding everything the maker needs to reproduce a chair. No drawings are necessary. The surface of the stick will bear the decorative profile, center and diameter of each mortise and dimensions of each tenon. It allows the craftsman to mark the decorative divisions and precisely locate any mortises along the leg. Often a chair maker's stick will have a small hook on one end for quick and accurate registration at the end of the leg.

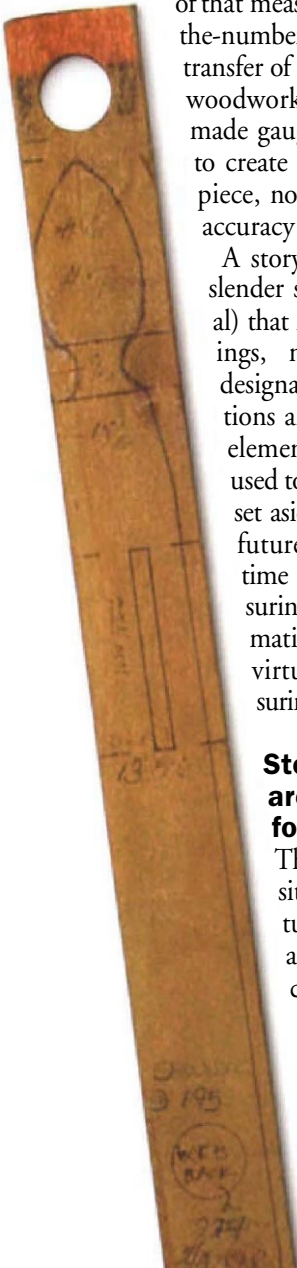
Furniture makers also benefit

For years I used story sticks in the shop when building furniture and freestanding cabinets. Sometimes I laid out the sticks from scaled blueprints; other times, I made them from full-sized drawings. You may have a favorite piece that you find yourself building again and again. A story stick can hold everything you need to jog your memory.

Why prepare a story stick when there are drawings? Well, sometimes the information necessary to build the piece is contained on more than one sheet. This requires unfurling, flipping and cross-checking. Usually a single story stick can contain all of the critical measurements. The horizontal divisions and features of the project



A Shaker chair maker's story stick. Charles Harvey of Berea, Ky., has created story sticks for more than 80 different chairs over the past 20 years. The stick at left contains all of the information he needs to build his standard dining chair (above), including mortise locations, rough and finished lengths of components, and the profiles of back slats and the turned finials.



Rules of Thumb (continued)

SIDEBOARD ON A STICK

A story stick for a case piece must hold multiple layers of information. The horizontal dimensions of the project go on one side of the stick; on the other side are the vertical divisions. Each side also can be broken up into columns. In this case the first column contains the dimensions for the top, face frame, door rails and knobs, and the next displays the information for the cabinet sides, bottom and partitions. A third column could be added to include more drawer information.



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Drawings get dirty, torn or wet in a normal shop environment. Story sticks are more durable. In my shop we cut the dimensions into the stick with a marking knife, darken them with a pencil, then seal the stick with a coat of lacquer; or we use indelible markers. To distinguish the sticks quickly from the countless other plywood scraps lying about, we highlight them with bright spray paint.

One of the best things about a story stick is that it can be used to set up a machine quickly and accurately. The story stick for a cabinet, for example, can be placed directly on the tablesaw to set the fence for ripping or to place a stop block for crosscutting. By the way, storing a stick is easy: Drill a 1/2-in.-dia. hole at one end and hang it on the wall.

There tends to be more information on a furniture story stick than on a cabinet-installation stick, so I divide a furniture stick into columns. Each column is for a different layer of the project. If one column contains the dimensions for the face frame and door rails, the next displays the information for the cabinet sides, bottom, rails and partitions, and the last contains dimensions for the drawer box. As you read the stick from left to right, the information takes you deeper into the cabinet.

Turners use them, too

When building Windsor chairs, I often have to turn 40 or 50 legs at a time. I've preserved my sanity by developing a smooth routine, which starts with a story stick. Turners almost always work from a

story stick, whether it's an actual strip of wood or just a strip of masking tape on the tool rest. My basic story stick is a scrap of plywood with a profile of the leg drawn onto it. Lines through the important divisions of the turning are extended to the edge of the stick and are used to mark the blank as it spins on the lathe.

A snazzier version is another strip of 1/2-in.-thick plywood with the pattern drawn onto it, but this one has 4d nails protruding at the significant divisions. Once the leg blank is round, I press the stick against the spinning workpiece and scribe every critical dimension in one shot. With the aid of the story stick, it takes me about three minutes to turn a leg.

Many woodworkers aren't aware of story sticks, which are part of the age-old practice of direct layout. Why measure twice to cut once when you can be sure the first time? □

The turner's story stick. Rodriguez made this stick for the front leg of a 17th-century corner chair. Each mark represents an important transition point. Spindle turning often begins with a parting tool plunging in to establish the depths at these key points. Then the turner works to reproduce the finished profile.

