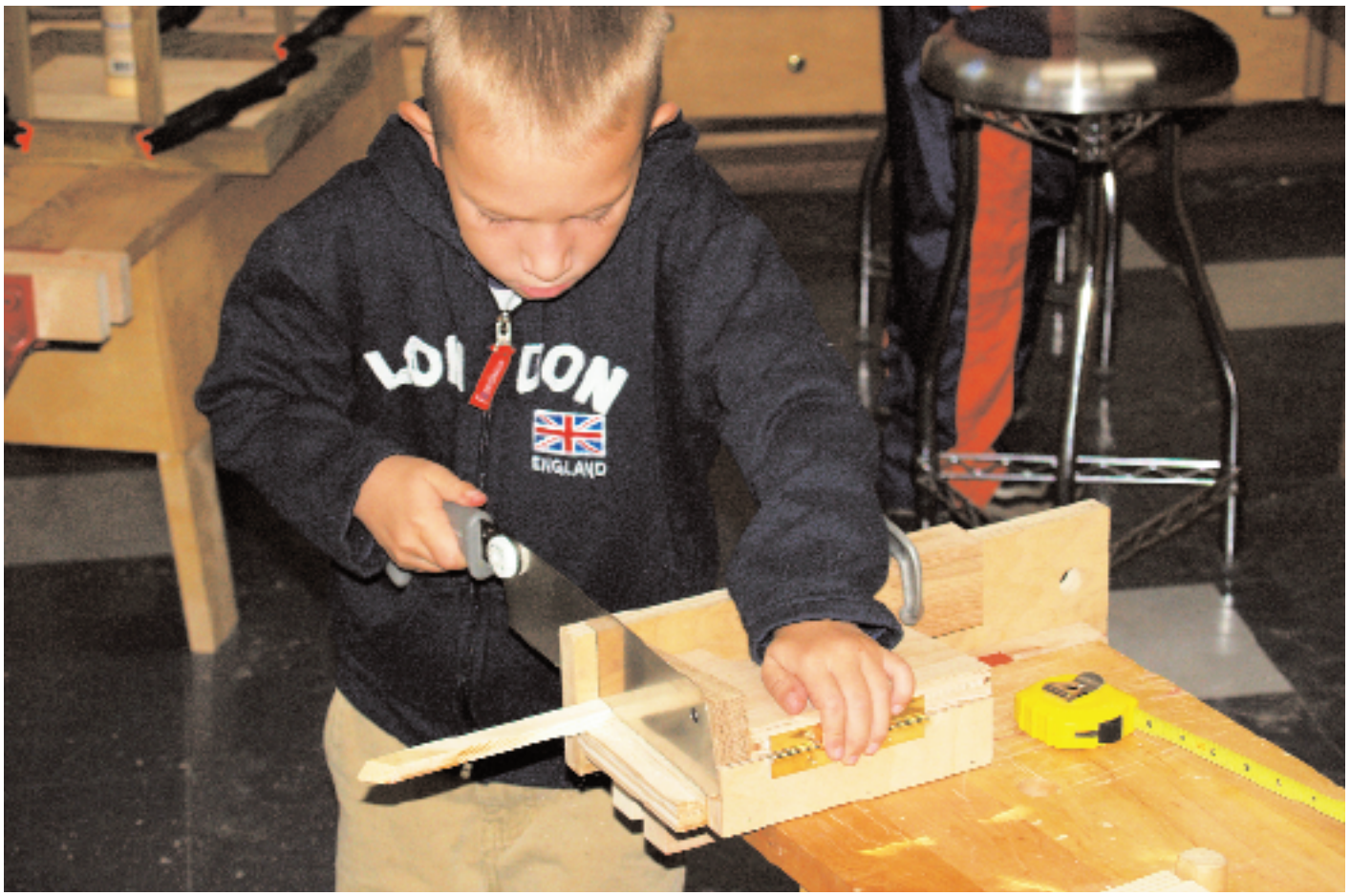


A BEGINNER'S BENCH HOOK

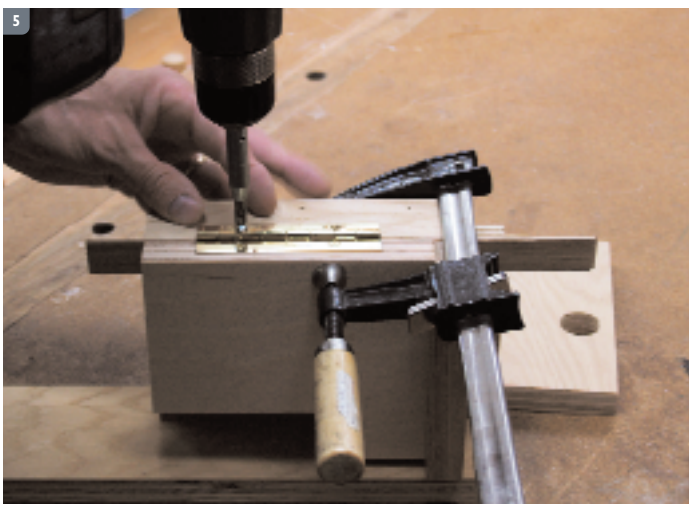
Some clever modifications make this a handy aid for kids

BY DOUG STOWE

Bench hooks are used with a workbench to hold wood while it is sawn. They serve a couple of important functions—they allow stock to be safely and effectively held as it is sawn, and prevent accidental contact between the saw and workbench or vise. The saw will damage the workbench, and accidental contact with the vise will quickly damage a saw. So the use of bench hooks both provides safety for the students and allows us to get better use from our investment in tools.

At Clear Spring School, we've gone through a number of bench hooks of various designs. Our kids are just learning, and saw cuts can wander off lines and out of grooves, making bench hooks less accurate over time. This year, instead of just replacing the old worn ones, I decided to redesign and improve. This new model is designed to give the students a better grip on the stock, offer better control during the cut, and provide for exact duplication of parts through the use of stop blocks. Another advantage of this new design is that it provides a clear place for the left hand to rest during the cut with a wall of safety between it and the blade.

There is always a trade-off in learning. Measuring and marking each piece of wood with pencil and square works well for projects where only one or two parts are required, but when there are a number of



parts that must all be the same length, the use of a stop block on the improved bench hook gives square cuts and precise lengths. While it eliminates some of the repetition of measuring and marking, it also eliminates error and gives the student greater speed and confidence in the work

We use Japanese pull saws from Vaughan and Bushnell Manufacturing. These saws, called Bear Saws, have a stiffer blade and are able to handle more abuse than a *dozuki* saw. To assist in accurate placement of the saw in the bench hook, magnets inset in the hinged guide piece hold the saw blade in position as it slides back and forth in making the cut. The improved bench hook can be assembled in mirror image for use by left-handed students

To make the bench hook, begin by cutting the various parts to size. The parts need not be exactly sized to the same dimensions as the bench hooks we use at Clear Spring. We selected the width of the base based on the maximum width of stock to be cut and the comfortable length of travel when using the Bear Saw. Woodworkers using longer saws could make wider bench hooks that would be quite effective. Also, the length of

Making Sloyd Trivets or Plant Stands

WHILE OUR PROGRAM at Clear Spring School isn't modeled directly on Educational Sloyd, there are times when we use sloyd projects for general skill-building. Making a sloyd trivet or plant stand as shown in Gustaf Larsson's book *Elementary Sloyd* (Silver Burdett and Co. Boston, 1902) is a simple project, made a bit easier still when we consider that in Gustav Larsson's instructions the students sized the stock to width as well as lengths using hand tools.

For this project at Clear Spring, the materials were prepared to width and thickness from scrap 2x4s, which provided material that nailed easily without splitting. The students carefully measure the distance between the cut line and the stop block and clamp it in place. After cutting the parts to length, the students sand them smooth and nail them into the finished trivet. While this is a simple project, it requires a great deal of attention to get good results. And of course the students take pride in their work.

Base supports 2 @ 5/8" x 5/8" x 5-1/2"
Slats 4 @ 3/8" x 3/8" x 5-1/2"
Nails 15 @ #18 gauge x 3/4"
(Round head brass-plated)

BENCH HOOK

BENCH HOOK

Base	1 @ 3/4" x 5" x 8"
Front	1 @ 3/4" x 3-1/2" x 15"
Hold-down	1 @ 3/4" x 5-1/2" x 6-1/4
Saw guide	1 @ 3/4" x 1-5/8" x 5-1/2
Back	1 @ 3/4" x 1-5/8" x 7"
Screws	3 @ #6 x 2"
Magnets	2 @ 3/16" x 3/4"
Piano hinge	1 @ 3/4" x 6"
Stop block face	1 @ 3/8" x 2" x 4"
Stop block top	1 @ 3/8" x 1-1/8" x 4
"C" clamp	1 @ 2"
Sandpaper	1 @ 4" x 6-1/2"
Weather strip	1 @ 1/4" x 1" x 4"

the front piece on our bench hooks is sized for cutting stock 12" or less, the case for most of our children's projects. You could make the front piece longer or simply use the bench hook without the stop block in place, though this would require measuring and marking each piece.

After the parts are cut to size, make a cutout in the hinged hold-down to provide clearance for the stop block. First, drill a 1-1/2" hole with a Forstner bit as indicated in the drawing; I use a drillpress, fence and stop-block for this operation since I make several bench hooks at a time (**1**). Then use the bandsaw with a fence to cut into the edge of the hole from two directions (**2**).

Next, use the drillpress to drill 3/4" holes for the magnets to fit. Careful adjustment of the depth is required so that the magnets, when glued in place, will be flush with the surface of the wood. Note that while most of the bench hook is made from 3/4" Birch plywood, the facing strip is made from solid oak (**3**).

Use screws to attach the front and back to the bench hook base. While this could be done with glue and nail gun, the screws allow parts to be replaced as needed without replacing the entire bench hook. Locate the screws some distance away from where the saw cut will be made. Use a spacer block to position the base 3/4" above the workbench while the front piece is attached (**4**). This 3/4" offset provides a place for the front piece to be gripped by the vise during use.

Use an nail gun or screws to attach the saw guide to the hold-down block, and then use a piano hinge to attach the hold-down block to the base. I use a 1/16" thickness of wood as a spacer between the parts while the screws are pre-drilled and driven in place. This gives full range of movement to the hinge and prevents it from binding before it puts pressure on the wood (**5**). Use a clamp to hold the parts securely in place as the screws are installed. The first cut with the saw requires a great deal of attention to make sure the blade is carefully aligned with the saw guide. In later use, the blade will fit easily in the pre-made saw cuts.

As final steps, glue coarse sandpaper to the base and secure heavy weather stripping to the underside of the hold-down. The sandpaper and the weather stripping help to keep the stock from moving around as it is cut, giving a bit more control to young hands.

Doug Stowe is a contributing editor for Woodwork *magazine.*