

Making Pocket-Hole Joints



Before doing this activity, make sure you understand how to use all of the tools and materials safely.

Adding pocket-hole screws to strengthen joints has become more popular since inexpensive equipment became available for small shops and home use. Fig. 8-1. Pocket-hole joinery is much faster than other wood-joining techniques because the self-tapping screws that are used eliminate the need to pre-drill the mating workpiece. Fig. 8-2. This prevents any misalignment problems as well. The self-tapping screw also acts as a clamp while the glue used in the joint can cure. The process is speeded up because you do not have to wait for the glue to cure before removing any clamps.



Fig. 8-1.



Fig. 8-2.

Following are a few basic techniques that will help you make pocket-hole joints.

1. Drilling pocket holes can be done in several ways. Expensive cabinet shops may use a dedicated machine just for drilling holes. Small shops or hobbyists often use a drill and a K2000 Kreg Jig. Fig. 8-3. You simply clamp the workpiece into the jig and drill the hole.

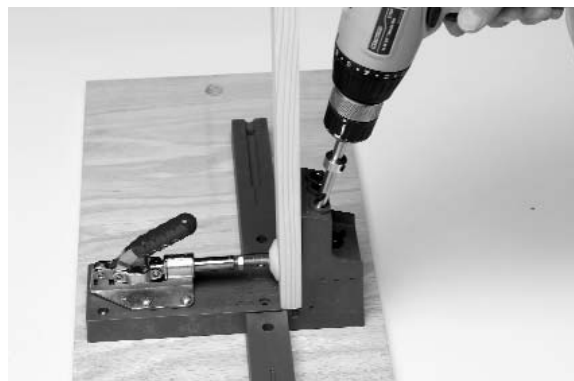


Fig. 8-3.

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2. The depth of the hole depends on the thickness of the wood. Fig. 8-4. In Fig. 8-5, you can see how the jig is set to different heights and how inserts are placed in the jig for various thicknesses of wood.

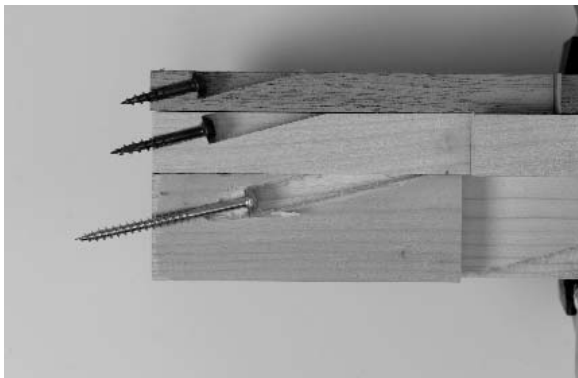


Fig. 8-4.

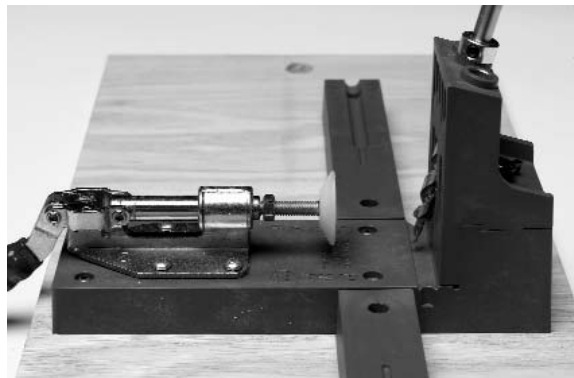


Fig. 8-5a.

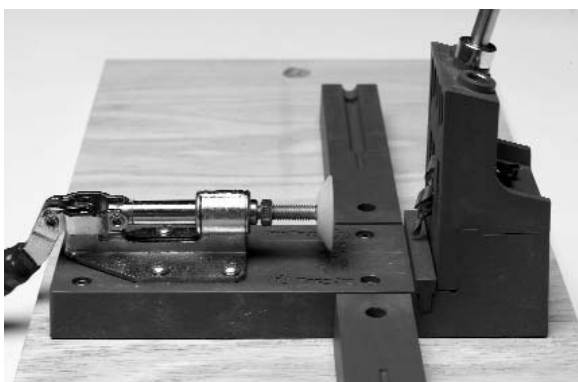


Fig. 8-5b.

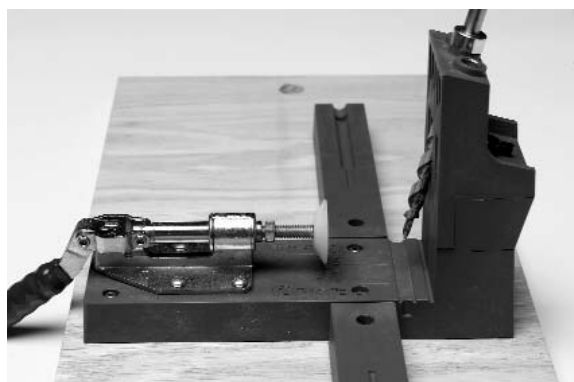


Fig. 8-5c.

3. The stop collar on the drill must also be adjusted for different thicknesses. It can be set on the arm of the K2000 or by actually measuring the distance from the drill flute (not the tip) to the collar. Fig. 8-6.



Fig. 8-6.

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4. On the top of the jig are guide holes for drilling holes spaced differently. Fig. 8-7. On a typical stile or rail you would normally use holes A and B.
5. Another way to drill pocket holes is with a Rocket Jig. See Fig. 8-1 again. To use this jig, simply clamp it to the workpiece and drill the holes. Fig. 8-8.
6. For special repair jobs, you can use the even smaller Mini Jig, which can be clamped to a finished workpiece. In Fig. 8-9, it has been clamped to a chair to repair and strengthen the legs.
7. To insert the screws in the pocket holes, first clamp the mating pieces together, being sure the face side is perfectly flat. The clamp shown in Fig. 8-10 is perfect for this, or you can make a special jig like the one shown in Fig. 8-11.



Fig. 8-7.



Fig. 8-8.



Fig. 8-9.



Fig. 8-10.



Fig. 8-11.

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Tips and Techniques 8 (continued)

8. Special plugs can be used to fill pocket holes after the screws are in place. Fig 8-12. Several different types of wood are available as well as plastic for MDF and melamine.
9. When you are building cabinets, one cabinet may sometimes be installed at an angle to the adjoining cabinet. An easy way to join the two stiles is to cut the angle on only one stile. For example, if the cabinets are joined at a 45-degree angle, you would cut only one stile at 45 degrees. This is much easier than trying to cut each stile at $22\frac{1}{2}$ degrees and then miter them together. When you are finished, there will be a small overhang that must be sanded or cut off. Fig. 8-13.

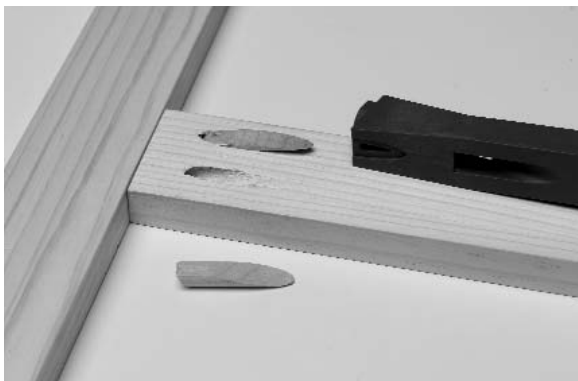


Fig. 8-12.



Fig. 8-13.

10. To screw together the two stiles of cabinets at an angle, make a jig similar to the one shown in Fig. 8-14. The angle on the piece at the left is the same angle that was cut on the stile. Note that there is also a shim attached to the base. This creates a V that acts like a stop for the angled stile. For $\frac{3}{4}$ -inch stock, this shim is typically about $\frac{1}{4}$ -inch thick. Experiment with it to get it perfect.
11. Slip the angled stile into the groove, as shown in Fig. 8-15, and hold it in place.



Fig. 8-14.



Fig. 8-15.

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12. Place the straight stile with the pocket holes drilled in it into the jig next to the angled work-piece and screw them together. Fig. 8-16.
13. After all the screws have been inserted, use a belt sander to sand off the overhang on the joint. Fig. 8-17.



Fig. 8-16.



Fig. 8-17.

14. Because the overhang has been removed, the two stiles will not appear to be the same width unless they are initially cut to different widths. For example, for the stiles to look as though both are 2 inches wide, the stile with the straight edge should be cut at $1\frac{5}{8}$ inches, and the stile with the angled edge should be cut at $2\frac{3}{8}$ inches. Fig. 8-18. After the joint is completed, it is very difficult to see the glue line.

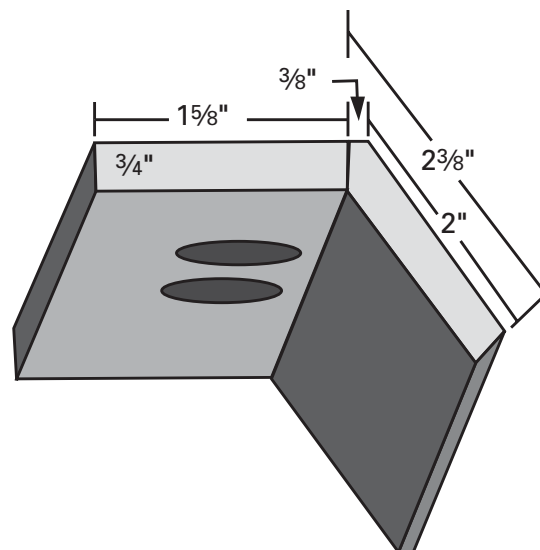


Fig. 8-18.

For information about Kreg pocket-hole screws and jigs contact:

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