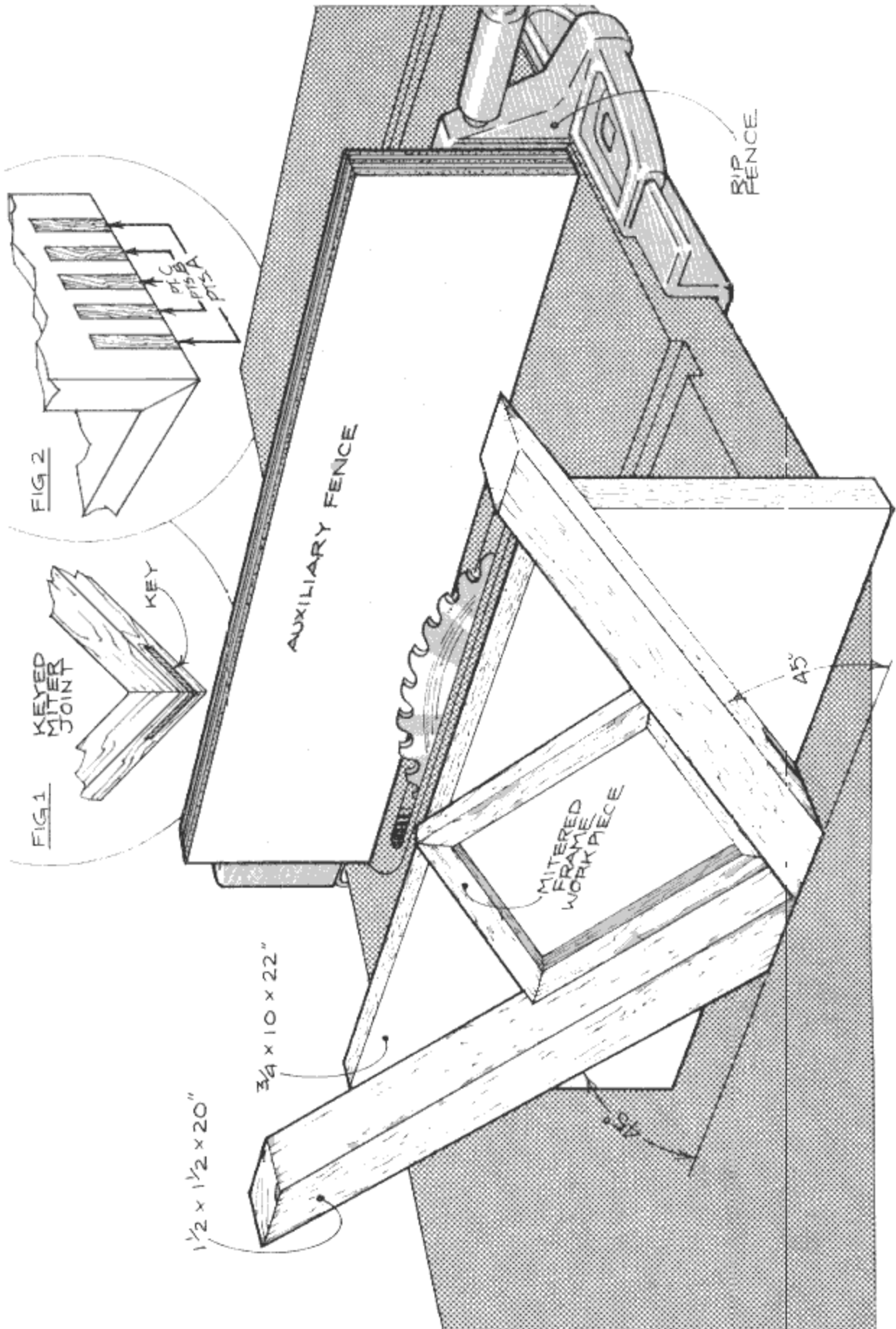




Project 14658EZ: **Keyed Miter Jig**

A flat miter joint that is simply butted and glued together will have little strength, so it is generally advisable to add reinforcement, usually with some sort of spline. The keyed miter is a variation of the splined joint that is both strong and attractive - and with this simple jig, it becomes surprisingly easy to make. Although it can be made somewhat larger or smaller, the jig we show is sized to accept a fairly wide range of mitered frames.

Keyed Miter Jig Complete Schematic



Keyed Miter Jig Step-by-Step Instructions

1. Cut a piece of 3/4" thick particle board or plywood to a width of 10" and a length of 22".
2. Cut two pieces of 1-1/2" square stock to a length of 20".
3. Miter the lower end to 45 degrees.
4. Glue and clamp the mitered pieces to the particleboard, making sure they are exactly 90 degrees apart.
5. Screw a 6" to 8" high auxiliary fence to the regular rip fence before using the jig. The auxiliary fence will provide additional bearing surface for the jig to ride against.
6. Set the fence so that the saw blade will cut a slot in the center of the mitered frame workpiece. **NOTE: The width of the slot will depend upon the thickness of the stock. Generally, however, you can cut a slot that equals the thickness of your saw blade (usually about 1/8"). For a wider slot, the dado-head can be used, or you can make several passes with the regular saw blade, adjusting the location of the rip fence for each pass.**
7. Set the blade height so that it comes within 1/16" to 1/8" of the inside corner of the joint. **IT SHOULD NOT**, however, actually cut into the inside corner.
8. Glue up the miter joint frame you are making before you use it with the jig. Apply glue to the mating surfaces.
9. Clamp firmly with a web clamp.
10. Allow to dry thoroughly.
11. Insert the frame in the jig.
12. Place the jig against the auxiliary fence. If necessary, the frame can be clamped to the jig.
13. Hold the jig firmly against the auxiliary fence, and push it through the saw blade.

As shown in Figure 2, the jig can also be used to cut multiple slots in wide stock. Points A and B, on all four corners, are cut with the same fence setting, as are points B and C.

These plans were originally published in Volume 9, Issue 1 of *The Woodworker's Journal* (Jan./Feb. 1985, page 49).