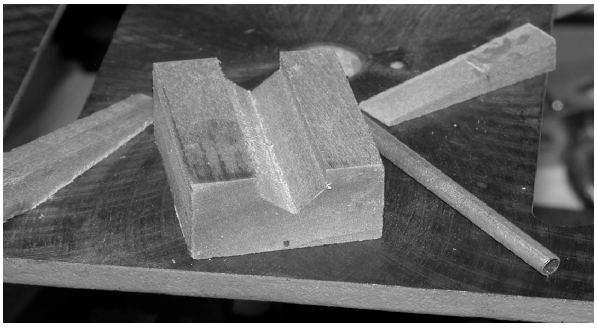
Centering a Hole in a Tube or Dowel

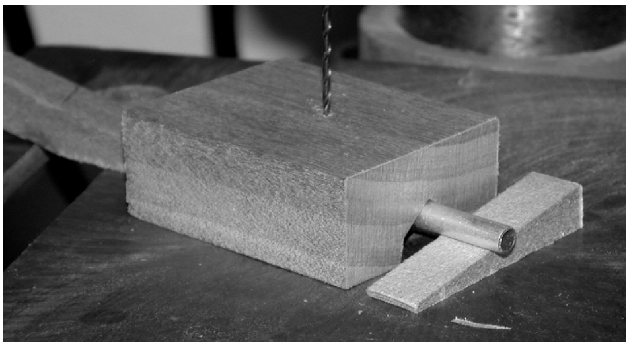
by George White

After suffering numerous failures in my attempts to drill holes in dowels and aluminum tubing to be used as prop hubs on molded props, I started sending emails to some of the "older boys" asking how to do it. Dave Mitchell in Virginia finally set me on the path to doing it right. Here's how to make a jig to solve the problem.

If you don't have one yourself, you'll need to find a friend who has a table router and a "V" router bit. I started with a piece of 1X2" reasonably hard wood which was about a foot long and routed out a "V" about 3/8" deep in the wood (note, you aren't likely to be able to make that cut in one pass without burning the wood, so do it gradually). The reason for making the "V" that deep into the wood is to allow you to drill various size dowels or tubing. Cut the block into small pieces so you can deal with short pieces of tubing or dowels as seen in the photo below. You'll also have some to give to friends!! Turn the "V" face up on a drill press and carefully drill a hole equal to the size prop shaft you plan on using — this must be drilled exactly in the apex of the "V" groove.



Cut a couple of basswood wedges as shown. I used 5/16" square hardwood stock from Lowe's. Then all you have to do when you're ready to drill the dowel/tubing is turn the jig over, use the wedges to shove the dowel/tubing into the apex of the "V" as far as it will go, run the drill bit through the hole you made in the jig, and drill away. The jig is easily held in place with your fingers, or if you are digitally challenged, use a clamp. You'll then have a piece of dowel/tubing with a hole which is centered through the diameter.



No sooner had I written the first part of this article than Al Pardue, with whom I'd been in discussions about the subject, sent me four photos of perhaps a simpler way, especially if you don't have access to a router table. The photos are self explanatory.