

Boring Partway

To bore a hole only partway through a workpiece, extend the quill until the cutting flutes of the bit just touch the workpiece. Set the depth control at the desired depth and lock it in place. Bore the holes you need. The depth control will stop the quill when the bit reaches the proper depth in the stock. All the holes you bore at any one depth control setting will be exactly the same depth. Note: When you need to bore a number of holes all at the same height (doweling boards edge-to-edge) on Model 500, use an accurate centerline as a guide.

BORING END GRAIN

When boring end grain, use the miter gauge to align the workpiece with the bit. Adjust the safety grip to the thickness of the stock. Note: When boring end grain, adjust the speed one to two letters slower than you normally would. End grain is much tougher than edge grain.

If the workpiece is less than 30" long (Model 500) or 55" long (Model 510), mount the rip fence on either the table or the extension table and use it as a backstop. If the piece is longer than 30" or 55" and you have to work without a backstop, clamp the workpiece to the table.

Adjust the table height and depth control as desired, make a four-point check. The power plant, carriage, table height and table tilt locks must be secure. As you feed the bit, don't be alarmed if it takes more pressure than usual to bore the hole.

BORING AT AN ANGLE

To bore a hole at an angle, simply tilt the table at any angle you desire, from 90° left to "0," in toward the power plant. If possible, mount the rip fence on the table and use it as a backstop (Figure 11-7). If the workpiece is very large, you'll have to clamp it to the table to prevent it from slipping. Caution: If the angle is acute and you're boring through the workpiece, remember to protect both the table and the rip fence with a scrap block.

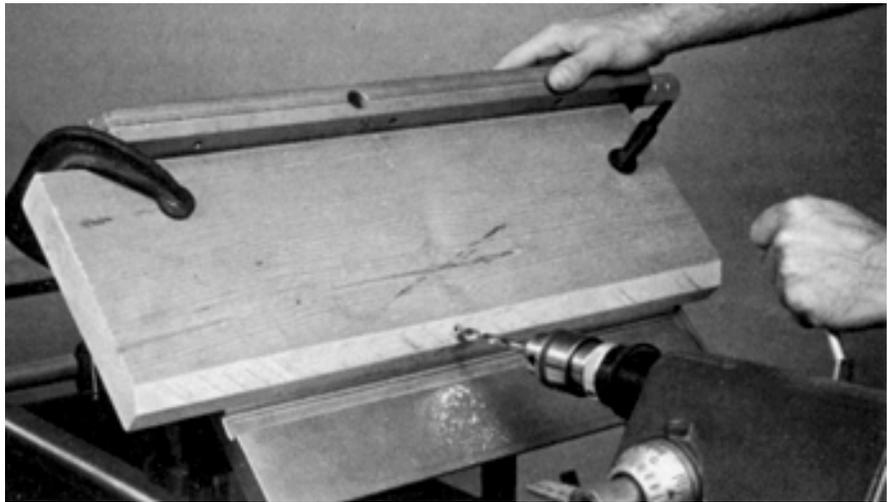


Figure 11-7. To bore a hole at an angle, tilt the table use the fence as a backstop or clamp the workpiece to the table.

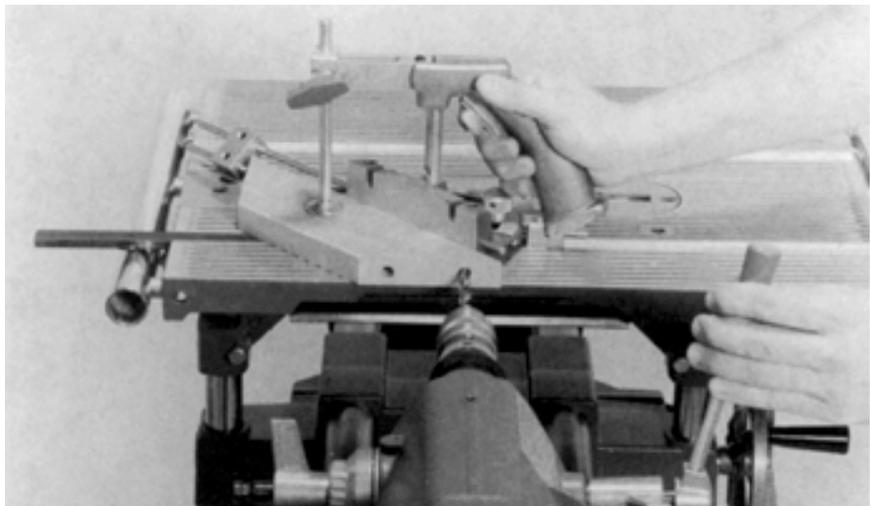


Figure 11-8. You can also bore at an angle by using the miter gauge. The miter gauge stop rod can be used to keep the bit from pushing the stock out of alignment.

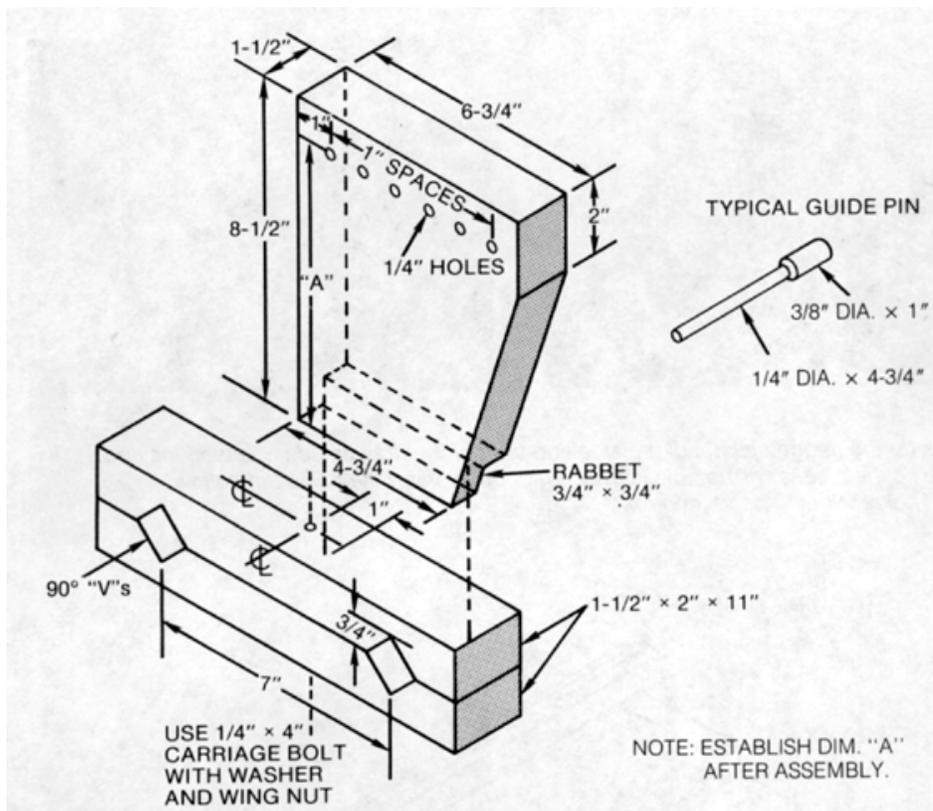


Figure 11-9. Construction details of the hole-spacing guide. The text tells how to accurately determine dimension "A".

Another way to bore at an angle, is to use the miter gauge. Figure 11-8 shows boring at an angle using the miter gauge stop rod to keep the bit from pushing the stock out of alignment.

BORING FOR DOWELS

Dowels are often used to reinforce various types of joints. They even sometimes substitute for the mortise and tenon joint. A more routine application is reinforcement with dowels when narrow boards are joined edge-to-edge to form wide workpieces. The combination of worktable surface, rip fence, and depth control makes the hole-boring operation purely mechanical. The edge distance of the holes is established by table height. The holes do not have to be exactly centered, but must be in line with each other.

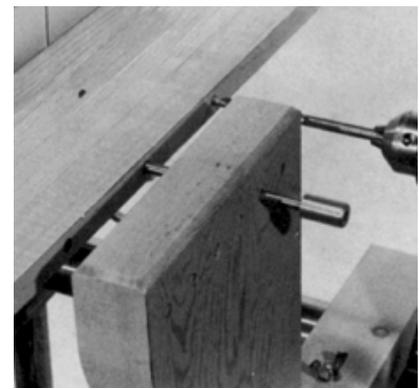


Figure 11-10. If you use a hole-spacing guide, you can do accurate work without needing layout. After you bore each hole, engage the pin. This positions the workpiece for the next hole. Spacing is determined by placing the guide pin in the appropriate hole in the guide.

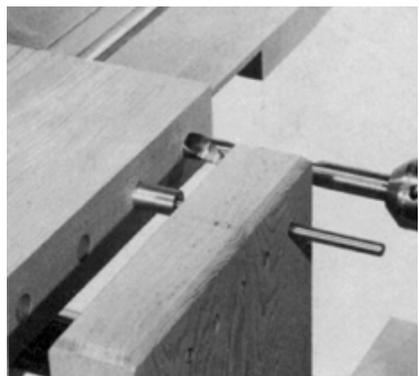


Figure 11-11. Since the guide pin has a bushing of 3/8" diameter at one end, you can bore either 1/4" or 1/2" holes. You can make an assortment of pins for various hole sizes if you wish.

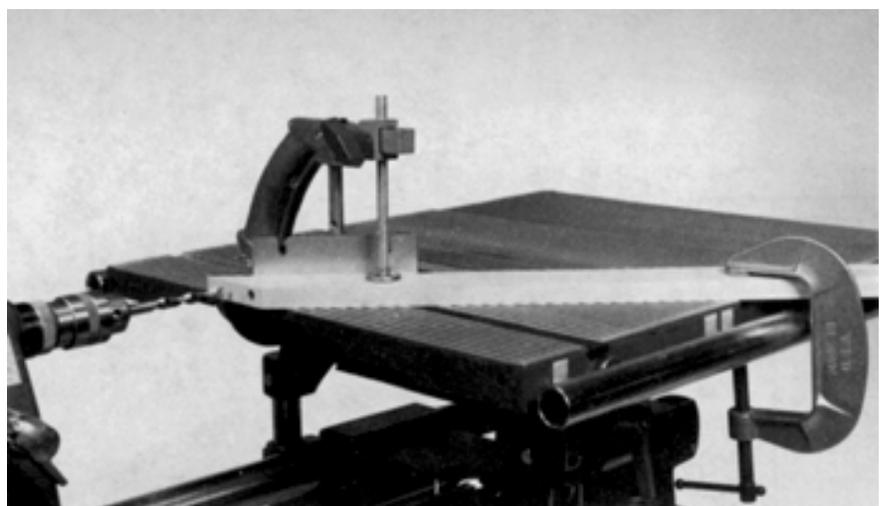


Figure 11-12. When the workpiece is extra-long, use a clamp to secure it to the table.

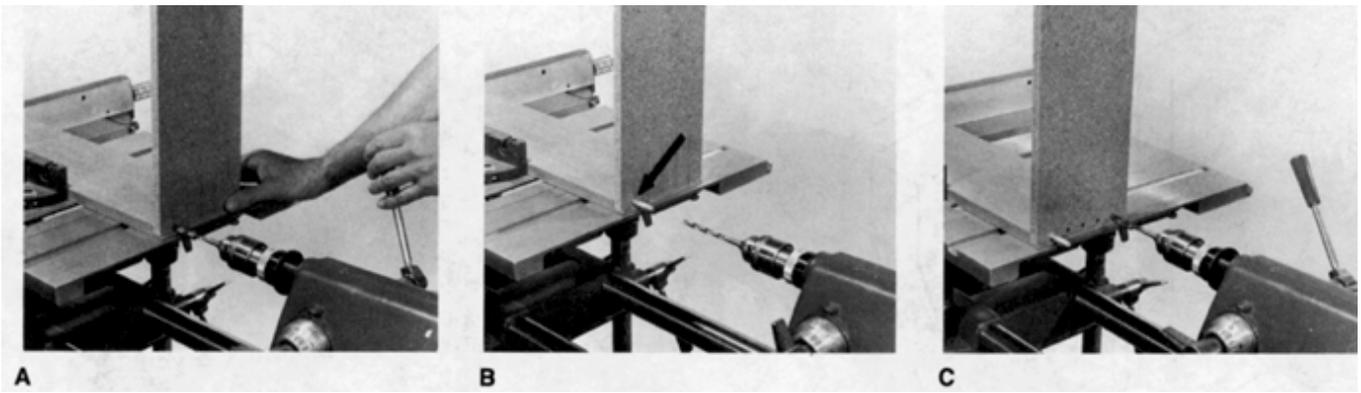


Figure 11-13. (A) When preparing to bore holes for the pegged joint, cut the side and front of the drawer side connections and position them. (B) Insert a dowel in the first hole so the pieces will be held in the correct position for the holes that follow. (C) Continue boring, controlling the depth of the holes with the depth control.

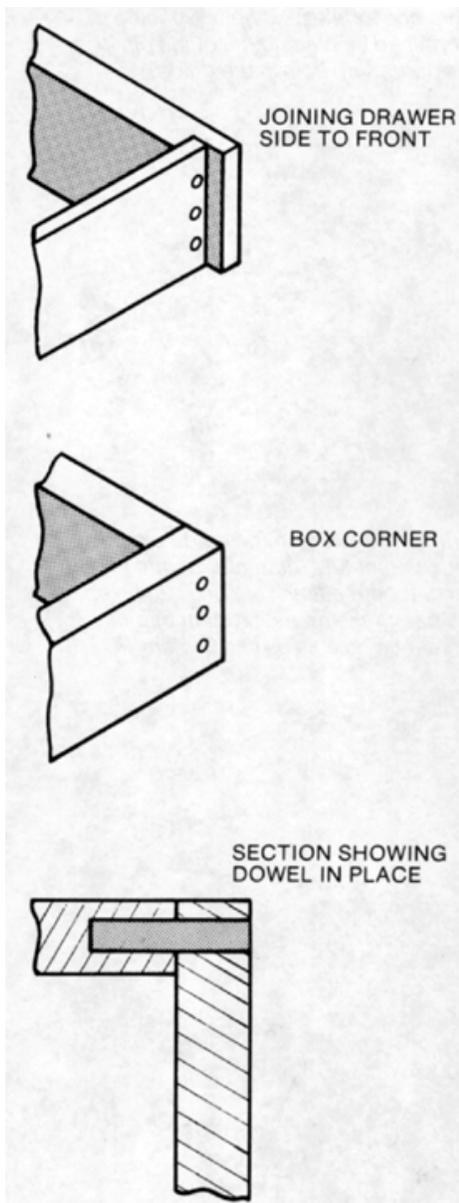


Figure 11-14. The pegged joint may also be used for box corners.

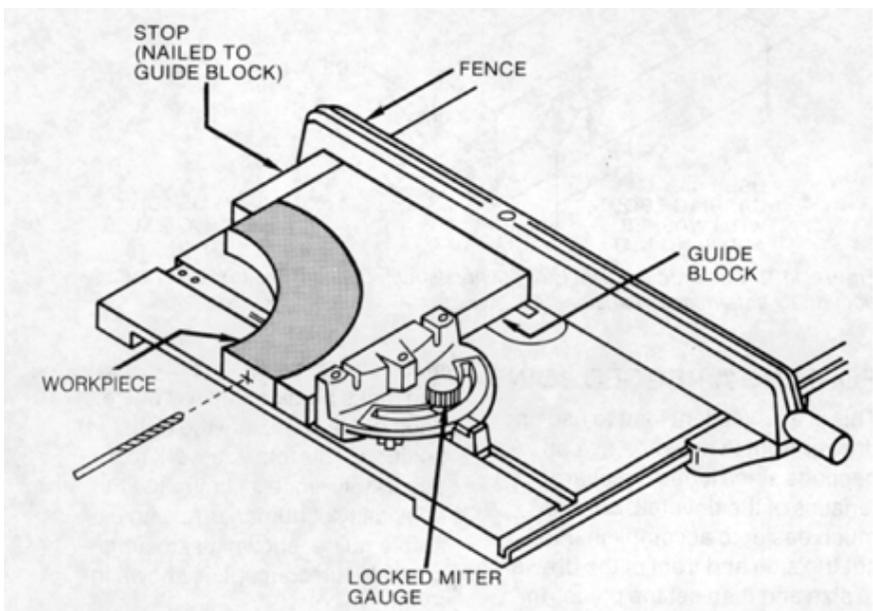


Figure 11-15. An example of a guide used for boring odd-shaped pieces.

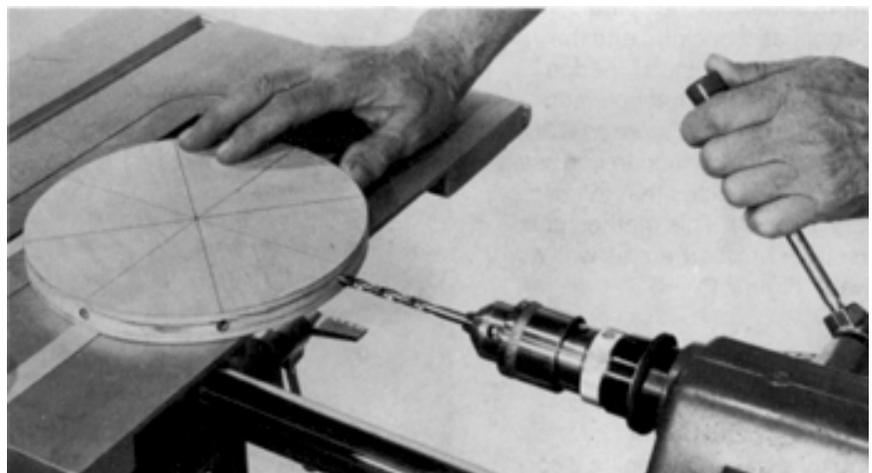


Figure 11-16. Using the pivot method to bore radial holes into the edge of a circular workpiece.