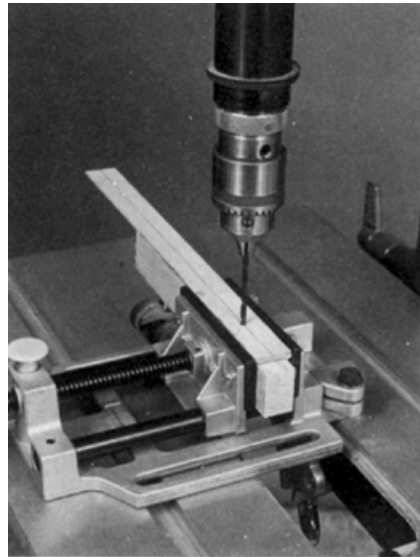
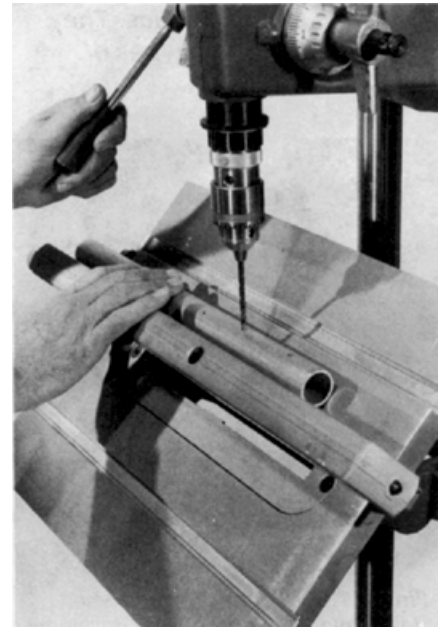


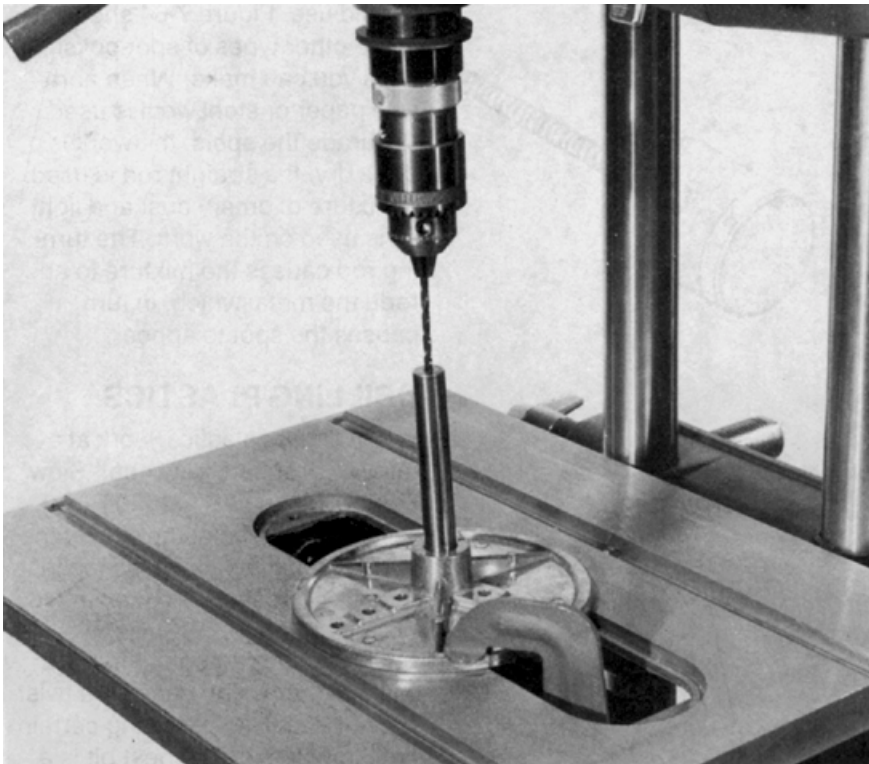
**Figure 7-57.** How a centering pin is used. The wood block under the stock is there to back up and keep the stock level.



**Figure 7-58.** The bit is substituted for the centering pin after the stock has been positioned.



**Figure 7-60.** The table and face form a V-block so you can accurately drill diametric holes in round stock.



**Figure 7-59.** Use a lathe faceplate to hold round bar stock for concentric drilling. If the stock is positioned carefully, this idea can be used for stock with a diameter that is less than the hole size in the faceplate.

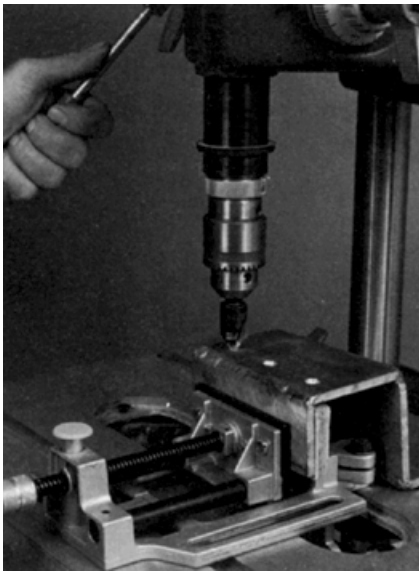
### Countersinking

Machine screws and stove bolts often have countersunk heads, so they need a seat in the work if they are to be flush with work surfaces. Countersinking is done after the holes for the fasteners have been drilled. As with all metal work, be sure the workpiece is secure in a holding device and that the holder is clamped to the table (Figure 7-61).

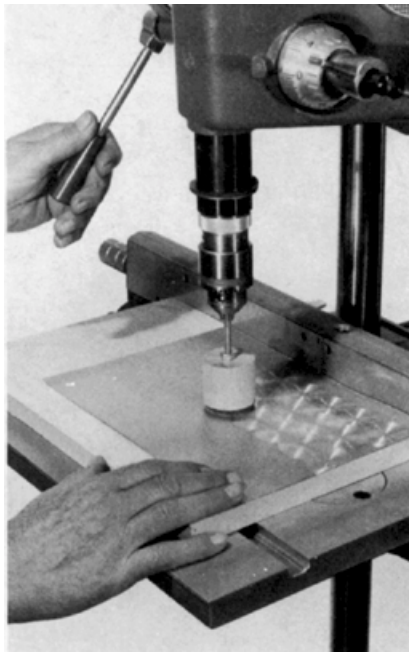
Countersunk heads on stove bolts and machine screws have a different angle than those on wood screws, so be sure to use a countersink designed specifically for metalwork.

### Spot Polishing

Spot polishing, or "damaskeening," is an attractive finish easily accomplished on soft metals by working as shown in Figure 7-62. The spot-polishing



**Figure 7-61.** When countersinking metal, be sure to use a countersink that will cut at the correct angle for fasteners like machine screws or stove bolts.



**Figure 7-62.** Spot polishing crates a distinctive finish on soft metal surfaces.

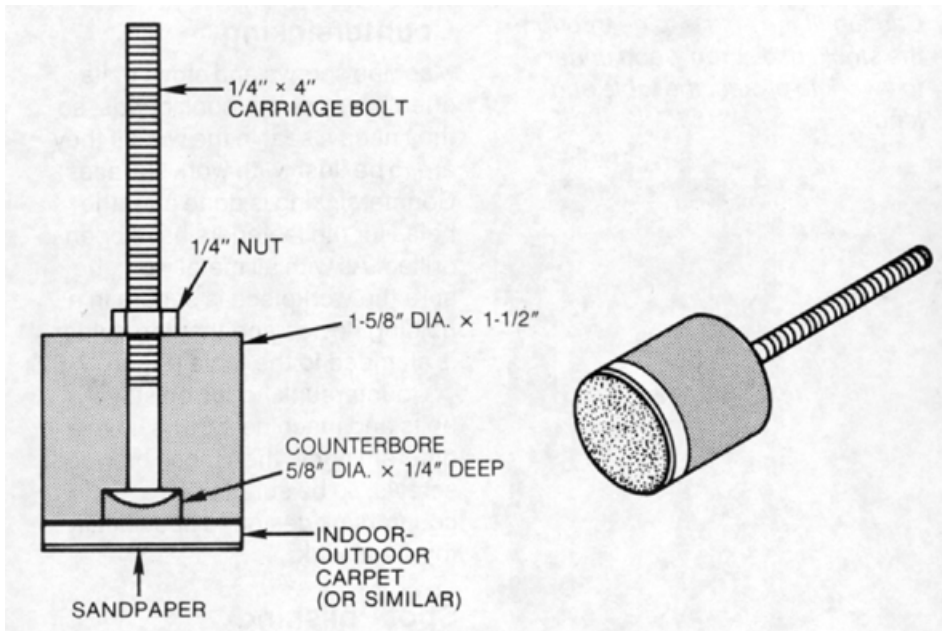
tool being used is made by following the plan in Figure 7-63. The final appearance of the finish will depend on the uniformity of the application and how much you overlap the spots. Use a backup block under the work and set the rip fence so each set of spots will have a common centerline.

You'll be able to judge immediately, by checking the first spot, just how much feed pressure you should use. Figure 7-64 shows some other types of spot-polishing tools you can make. When abrasive paper or steel wool is used to abrade the spots, the work is done dry. If a straight rod is used, a mixture of emery dust and light oil is used on the work. The turning rod causes the mixture to abrade the metal which, in turn, causes the spot to appear.

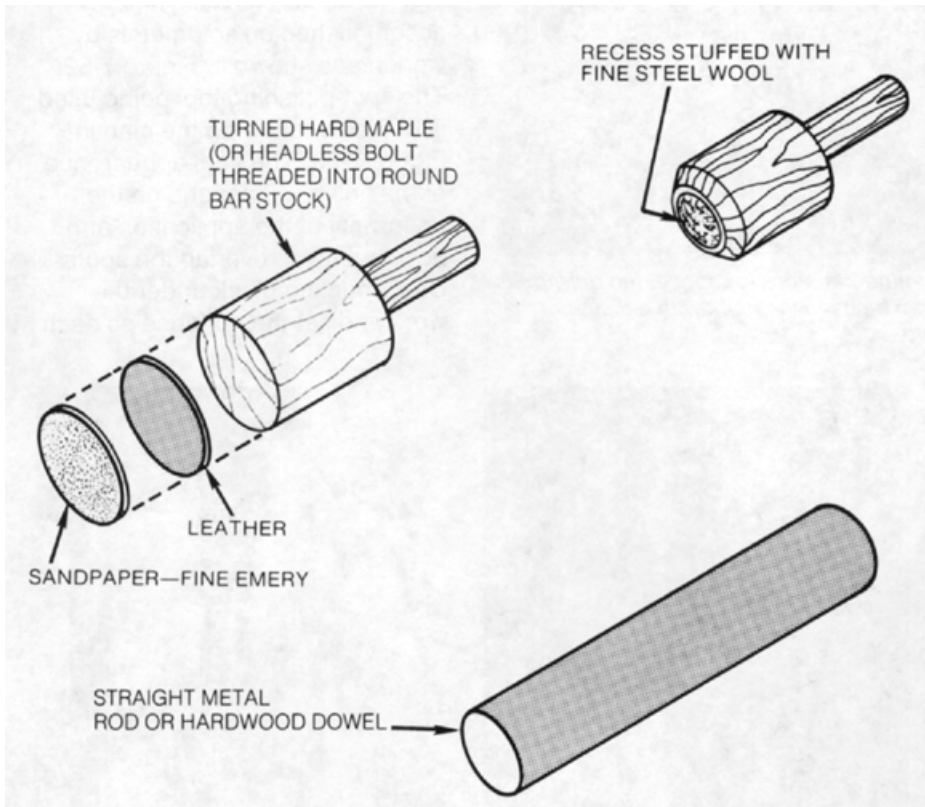
## **DRILLING PLASTICS**

When drilling plastics, work at a fairly slow speed, between "Slow" (700 RPM) and "0" (1050 RPM). The larger the hole, the slower the speed should be. If you go too fast, the bit will heat up and melt the plastic.

Don't use brad-point bits; you will dull them. You can use a twist bit, but you risk splintering certain types of plastic. The best bit is a special plastic-drilling bit. These bits have a tip ground at 60° for a smoother cut in plastic (Figure 7-65). Warning: Do not use twist bits to drill plastics. They will splinter certain types of plastic.



**Figure 7-63.** Construction details of the spot polishing tool.



**Figure 7-64.** Three examples of other types of homemade spot-polishing tools.

**Figure 7-65.** For best results when drilling plastic, use a plastic-drilling bit. These special bits are ground at a steep angle to make a smooth cut in different types of plastic.

