

Tip #52 Shopsmith Jigsaw

The Shopsmith Jigsaw is no longer manufactured. However, information about the jigsaw is included in this book as a reference for those woodworkers who purchased one when it was part of the Shopsmith Woodworking System.

Because the jigsaw can cut curves of very short radius with an extremely fine kerf, it is especially adapted to intricate scrollicwork and fretwork. It is also used for pierc-ing cuts, pad sawing and cutting components for inlay, intarsia (wood mosaic), marquetry (inlaid veneer), and intricately pieced design work in metals.

JIGSAW-SETUP AND FEATURES

To set up your jigsaw, follow the instructions in the Owners Manual that came with your jigsaw. Some of the special features of the jigsaw are:

The jigsaw mounts on the Mark V (Figure 16-1) or a Shopsmith Power Stand.

When the jigsaw is mounted on the Mark V, a complementary tool can be run on the main spindle. An ideal combination, since you will be doing curve cutting, is jigsaw and drum sander (Figure 16-2). Another possibility is jigsaw and disc sander. Always remember: On dual setups, the speed range you use must be that of the slower tool.

- The jigsaw converts to a sabre saw for cutting large workpieces or making piercing cuts in thick stock.
- The jigsaw will cut stock up to 1-3/4" thick. The distance between the blade and the bend in the arm (throat distance) is 18", making it possible to saw to the center of a board 36" wide. With the arm removed, the size of stock that you can saw is limited only by what you can safely control.
- The blade chucks will accept blades up to 1/4" wide, and 5" long. These chucks can be indexed 90°, so that you can work with the width of the blade either perpendicular or parallel to the arm. When the blade width is parallel to the arm, you have an unlimited cutoff capacity. The stroke of the blade is 7/8".

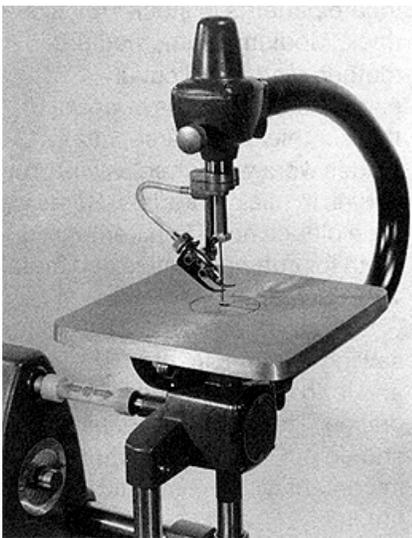


Figure 16-1. The jigsaw can be mounted on the Mark V as shown or on a Shopsmith Power Stand.

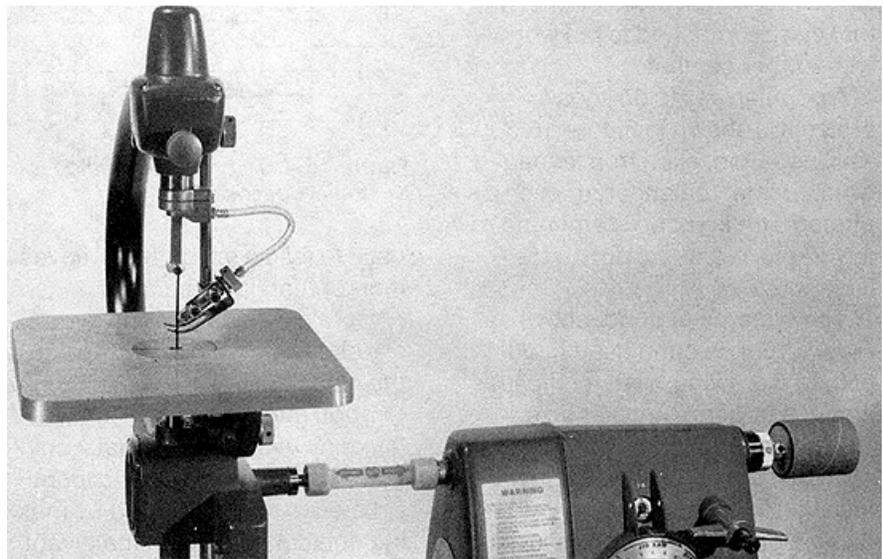


Figure 16-2. The jigsaw can be used in combination with the drum sander as shown, or the disc sander.

- The table can be tilted from "0" to 45° right (away from the arm). It has an adjustable positive stop at "0."
- The jigsaw has a blower that keeps the cutline clear.

JIGSAW BLADES

The jigsaw will mount three types of blades: regular jigsaw (or fret saw) blades, sabre saw blades, and jeweler's blades. Within each of these categories, there are many different blade sizes that are classified by blade width, thickness, and number of teeth per inch. Choosing the right blade for the job will depend on:

- the kind of material you're about to cut
- the thickness of the material
- the intricacy of the pattern
- the accuracy and smoothness of cut you want.

Choose jeweler's blades for delicate scrollwork in veneers, thin woods, nonferrous metals, plastic, mother-of-pearl, and abalone thinner than 1/8". Thin, fine-toothed jigsaw blades will cut intricate patterns in stock 1/8" to 1/2" thick. Medium-width, medium-toothed blades will cut uncomplicated patterns in wood 1/4" thick or thicker. Coarse, heavy blades work well when sawing long curves in thick materials. Some wide blades have fine, tempered teeth for cutting plastics and metal 1/8" thick or thicker.

Sabre saw blades are useful for sawing uncomplicated patterns and long curves in large workpieces. The blade you select should cut with at least three teeth in contact with the stock at all times.

PATTERNS AND LAYOUT

Original designs can be drawn full-size either on the stock or on paper that can be attached to the work with rubber cement.

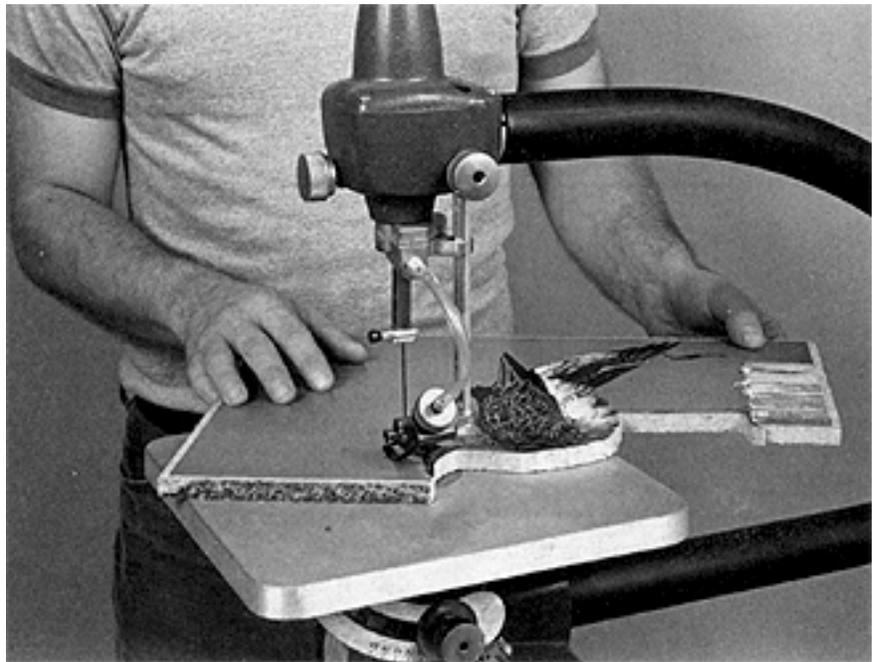


Figure 16-3. Illustrations from magazines, posters, calendars, or photographs can be rubber cemented directly to the workpiece.

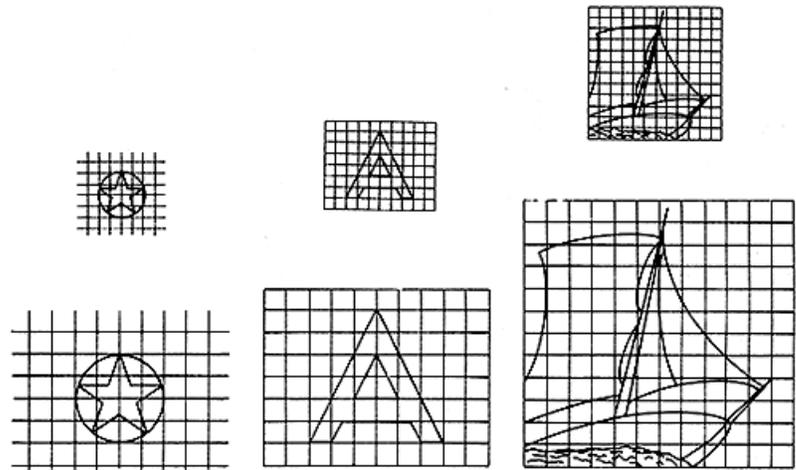


Figure 16-4. The squares method is commonly used to enlarge or reduce an illustration for jigsawing.

A popular way to do jigsaw projects is shown in Figure 16-3. An illustration taken from a magazine, poster, calendar, or even a photograph is rubber cemented to a workpiece and cut out on the jigsaw.

The squares method, shown in Figure 16-4, is often used to duplicate a drawing, plan, or illustration in a larger or smaller size.

Many woodworkers who do a lot of jigsaw projects avoid the layout involved in the squares method by using a pantograph. This is a special, adjustable tool that is hinged in such a fashion that a tracer, used to follow the pattern, moves a marker that duplicates the pattern.

More methods of work layout are shown in Figure 16-5. Some of the ideas make it possible, through joining, to form large items by using cutoffs that would otherwise be wasted. Two identical pieces can be formed by making one cut if you plan the layout carefully. When many parts are cut from the same strip or panel, it's good practice to first make all the patterns so they can be positioned on the work for best grain patterns and least amount of waste.

Figure 16-6 shows some pattern ideas that can be used, for example, as shelf support components. When duplicating these or when putting your own ideas on paper, a French curve (Figure 16-7) can be very helpful.

JIGSAW SAFETY

Warning: Before using the jigsaw read and understand these important safety instructions:

Danger Zone-The jigsaw danger zone is 3" out from the blade in all directions.

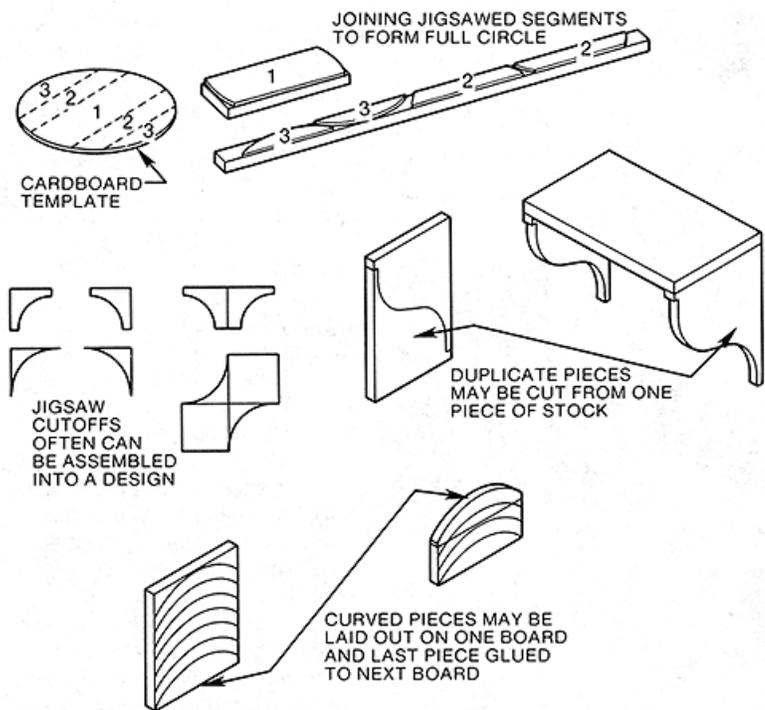


Figure 16-5. You can reduce waste and speed up production if you pre-plan cuts.

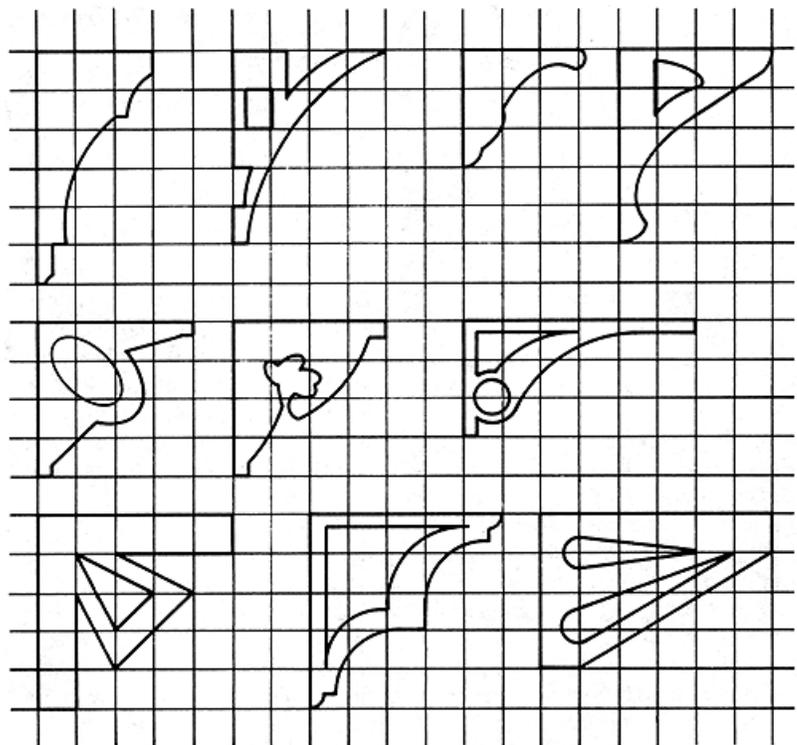


Figure 16-6. Typical jigsaw patterns for shelf support components.

When you're using the jigsaw as a sabre saw, the zone extends to 12" above the blade.

- Wear proper eye protection.
- Remember that part of the blade extends beneath the table. Never reach beneath the table to adjust the table tilt, to tighten the Mark V accessory mount lock, or for any other reason while the machine is running. Turn off the jigsaw first and let the blade come to a complete stop.
- When removing jigsaw blades, remember that these blades are tensioned by a strong spring. If you loosen the locking screws in either chuck without first releasing the tension, the upper blade chuck will snap back in the tension tube, possibly damaging the jigsaw or injuring you.
- Always turn the jigsaw on first, then feed the workpiece into the blade. Never turn on the machine with stock pressed up against the blade.
- Don't use worn, dull or damaged blades. They have a tendency to heat up and snap while you're working.
- Recondition or replace worn blade guides immediately.
- If you're using a Shopsmith Power Stand, be sure you're using the proper pulley and belt combination and that the pulley and belt are properly guarded.

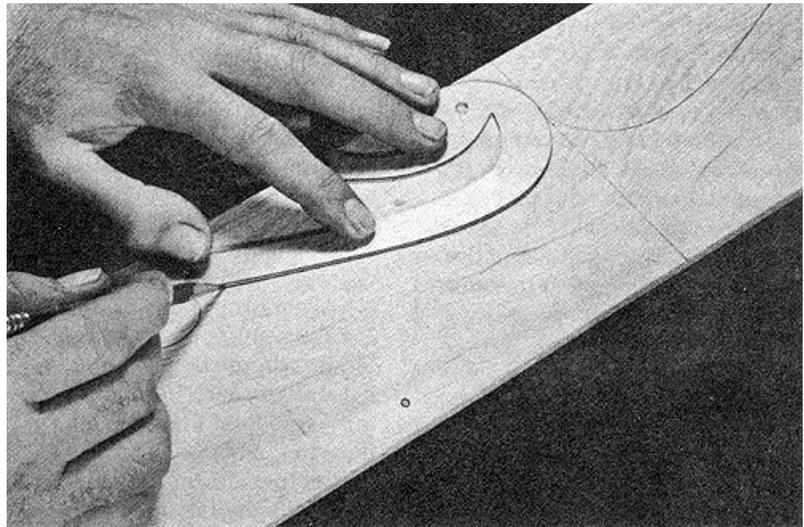


Figure 16-7. A French curve can be very useful when planning scroll-work designs.

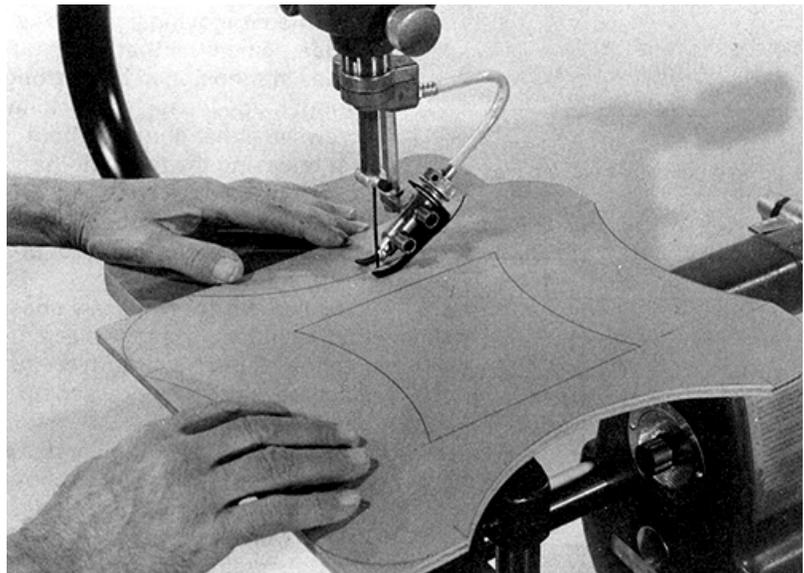


Figure 16-8. As you cut with the jigsaw, feed the work slowly. Do not force it or try to turn a corner that's too tight for the blade.

JIGSAW SPEEDS

Before you begin any jigsaw operation, turn on the Mark V, set the speed dial, and let the machine come up to speed.

The speed of the jigsaw is determined by the blade you're using and the material you're cutting. Use speeds between "Slow" (700 RPM) and "E" (1150 RPM).