



Overcome Power-tool Phobia

Learn how to use power tools with confidence. Find a link to a soil sifter project to try, too.

by Rick Gush

Safety & Trouble

Most power saw accidents are the result of accidental touching, unsteady wood and lack of attention to other safety practices. The main cause of accidents is trying to help the saw. Reaching in to clear a small piece of cut wood is a natural impulse, but power-saw safety requires that carpenters learn to control their helping instincts.

Unsteady wood often bounces under pressure from the spinning saw blade. When the wood bounces, the saw can push itself up and out of the cutting groove. Liberal use of clamps to hold wood steady is the best idea.

Most circular saws and table saws include an automatic safety cover. This hinged cover is kept pulled over the blade by a tension spring.

The most important thing to remember is to always wear safety goggles when using any type of power tool and most types of hand tools.

Ear protection is an investment for your hearing and should always be worn as well. Always remain alert, tie back long hair and leave the jewelry on the dresser.

Accidents happen when you let your guard down and think "just this once."

TopTools are a man's domain and, historically, women have been steered away from them. While we can understand the historical background for this prejudice, there really aren't any good reasons why construction and mechanical repair should be restricted to men. Tool use doesn't require the brute force of a large male, and the smallest women on the planet have more-than-enough force to cut boards, pound nails and drill holes.

Farm women have a great need to understand how to fix equipment and repair structures. Knowing how to use power tools is a practical skill, and new carpentry skills can lead to many useful and decorative improvements to a farm home. But sadly, many women are intimidated by tool use. Power saws just seem so dangerous and smashing hammers around doesn't sound like much fun. But an emergency, such as when a section of the fence breaks and your goats get loose, is not the best time to learn about power saws and other fence-building tools. A sense of urgency often leads to trouble. What do you do when you've got no skills? The old-fashioned way is to teach yourself. Replace uncertainty with feelings of self-empowerment by completing a simple project.

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Tool Control & Safety

Before using any tool, you should have a good mental picture of how it will work and how the action will go forward.

Litmus Test

One key to saw use is being comfortable changing the blades.

It's also a sort of litmus test for familiarity with the equipment. If you cannot change the saw blade, you shouldn't be using the saw.

Changing blades is a bit awkward with a circular saw because the safety guard gets in the way, but it's really not that hard.

A determined 10-year-old could get the job done. Obviously, a carpenter should always unplug the saw before changing the blade or making height or angle adjustments.

TopThis mental preparation is the key to safe tool use.

A good woodworker will set up a cut with the saw and then rehearse it a few times. Only when they're certain that



everything will go smoothly will they turn on the power.

The main requirements of effective tool use are establishing and maintaining control. Control does not mean brute power, but rather the accurate application of small amounts of force. It's a myth that one must use a lot of force with carpentry tools. Minimal force is almost always best with tools, and this is certainly so for power saws, drills, chisels and other cutting tools—let the tool do the majority of the work. Even hammers get the bad rap that they need to be slammed down hard on nails. Not true. Aim is about a hundred times more important than force when hammering nails; so it is with all carpentry tools. A power saw should glide through wood cuts with about the same ease as sliding the turkey platter across the table to Uncle Fred. Take it easy, establish control and follow through without straining. This same basic rule applies to all tools.

TopWoodworking Tools Circular Saw

A circular saw is a power saw used to cut straight lines. Like most power tools, the circular saw is potentially dangerous and should be given due respect. Because this saw cuts straight lines, a "guide board" (a long, straight board clamped to the piece being cut) is usually used to ensure a straight cut. Guide boards are highly recommended because it's difficult to cut a nice, straight line by just eyeballing a pencil line. For short cuts, such as a straight cut across a 2 x 4, just mark the line and cut the board with hand guidance. However, if you're not short on time, a guide board is advised, even for cutting a 2 x 4.

Jig Saw

A jig saw has a small, straight blade that moves up and down. Jig saws are meant for cutting curves, but can be used to cut straight lines when a guide board is used. This saw is smaller and easier to use than a circular saw, and some carpenters prefer to use a jig saw for rough cuts, whether straight or curved.

Electric Drill

Electric drills allow the user to drill holes and fasten screws effortlessly. Electric drills usually have a switch that allows either forward or reverse spin, so always check the current spin setting before using the drill. Drills can cause injuries when the piece being drilled is not held securely; the high torque of the drill can twist and spin the piece. This quick, uncontrolled movement can injure your hands. It's advised that you clamp down the piece to be drilled. Also be careful not to drill through the piece you're working on, damaging the surface beneath it.

Hammer

Though the hammer is the most basic carpenter's tool, it's also potentially dangerous, as fingers are known to get smashed while holding a nail. The right way to pound a nail is to take your time, don't hurry, and find a way to hold the nail and hit it softly without hitting your fingers. Professional carpenters also know that the best way to pull a bent nail out of a board is not to pull back directly on the hammer, but instead to hook the nail with the claws and then push the hammer sideways, using the side of the hammer head as the lever to pull up the nail.

Nippers

Also known as tin snips, nippers are used to cut metal and metal mesh.

Nippers are different from scissors and pruning shears in that their blades are harder. The powerful blades can also cut fingers if they are held too close to the cut, so it's a good idea to wear gloves when using them. The nippers themselves are not the usual hazard, but fresh-cut pieces of metal are; they can easily cut and scratch unprotected hands.

Wood Chisel

A wood chisel is used to remove wood from tight spots, such as cutting out a mortise for a hinge, or for notching. Wood chisels need to be sharp and this sharp edge needs to be respected, even during casual handling. The real danger with wood chisels is when they're being pounded with a hammer. Always work in a direction away from your body and never hit the chisel too hard.

The Project <Build a Soil Sifter>>>

Projects turn out best when there's a clear plan of action: a list of materials, a description of dimensions and details, and a series of steps by which the project will progress.

A project plan, whether it's the creased centerfold from Popular Woodworker magazine or an article about building birdhouses in a children's magazine, has the completed calculations, the materials list and the step-by-step instructions.

What could be easier?

Sometimes a project plan must undergo adjustments, especially if you don't have all the specified tools or if the materials available differ from the official list. Occasionally you'll want to make changes to customize your project. The best project is like a kitchen recipe: The instructions are all well and good, but adding a touch of your own can make the results much more personal. Top