



simple steps for making **Leather Projects**

Create rugged, great-looking tool holders with just a few tools, some scraps of leather, and an afternoon.

■ I've always admired the leather tool rolls many carvers use to protect their knives and gouges. The idea seemed perfect for other woodworking tools as well. But I always thought working with leather required a lot of special skills, tools — and sewing.

As it turns out, working with leather is

a lot simpler than it looks. And in a few hours, you can make a custom tool holder from some small, inexpensive pieces of leather.

Making a tool holder out of leather has a few advantages. Leather cuts and shapes easily and can be fastened in several easy-to-master ways: gluing, stitching, and rivets. And the order of “construction” is similar to woodworking. You start by cutting pieces to size, then shape them to fit. Finally, the pieces are joined together.

After taking a look at the essentials, you can try your hand at the projects on page 40, or you can design one to suit your tools.

Getting Started. With so many different types of leather available, choice can be overwhelming. I chose split suede because it's thin and flexible. This makes it easy to

stitch together, but it's still tough as nails. You can usually find it at craft and fabric stores or from a leather supply store. (Sources are listed on page 51.)

LAYOUT & SIZING

You really only need a few things to cut leather. The first is a smooth, flat worksurface. I used a plastic, “self-healing” mat, as you can see in the left margin photo .

The second thing is a cutting tool. I found that a utility knife with a fresh blade works just fine.

The final item is a straightedge. For this, you can turn to a framing square. It's just the right length to handle the size of pieces you'll be working with and helps to lay out square corners.

Layout. Spread the leather on your worksurface and look it over





▲ **Cutting Leather.** A framing square guides a sharp utility knife as you cut through the leather in one pass.



▲ **Folded Edge.** Rub the leather with a piece of metal to create a "crease." Then glue the mating faces with contact cement.

to get the most out of the pieces. Be on the lookout for stains, brands, or holes. Keep in mind that one piece may be covered with another, so you don't always need a piece with two "perfect" faces.

Don't Move It. Once you have the location picked out, center it on your worksurface, and mark out the pieces with some chalk. Since the leather can stretch and distort, you don't want to move it around while you're cutting. This can result in rounded corners and wavy edges. So it's best to leave it in place and just reposition the square to make the cuts.

Sizing each piece of leather is determined by how it'll be used. For example, if a piece will be layered and matched edge to edge with another, it's a good idea to cut both pieces a little oversize (about $\frac{1}{2}$ "). Other pieces can simply be cut to the exact size you need.

Make the Cut. To make a cut, press down firmly on the framing square and slice completely through the leather in one pass (left photo above). Then reposition the square to make other cuts.

Prepare the Seams. Once you have the parts cut, you can lay out the seams for stitching.

You can draw the seams in place with a pencil. But, most of the time, I used an auxiliary vise called a "stitching pony" to guide the stitching (box below). To keep the pieces aligned, I glue the parts together with contact cement.

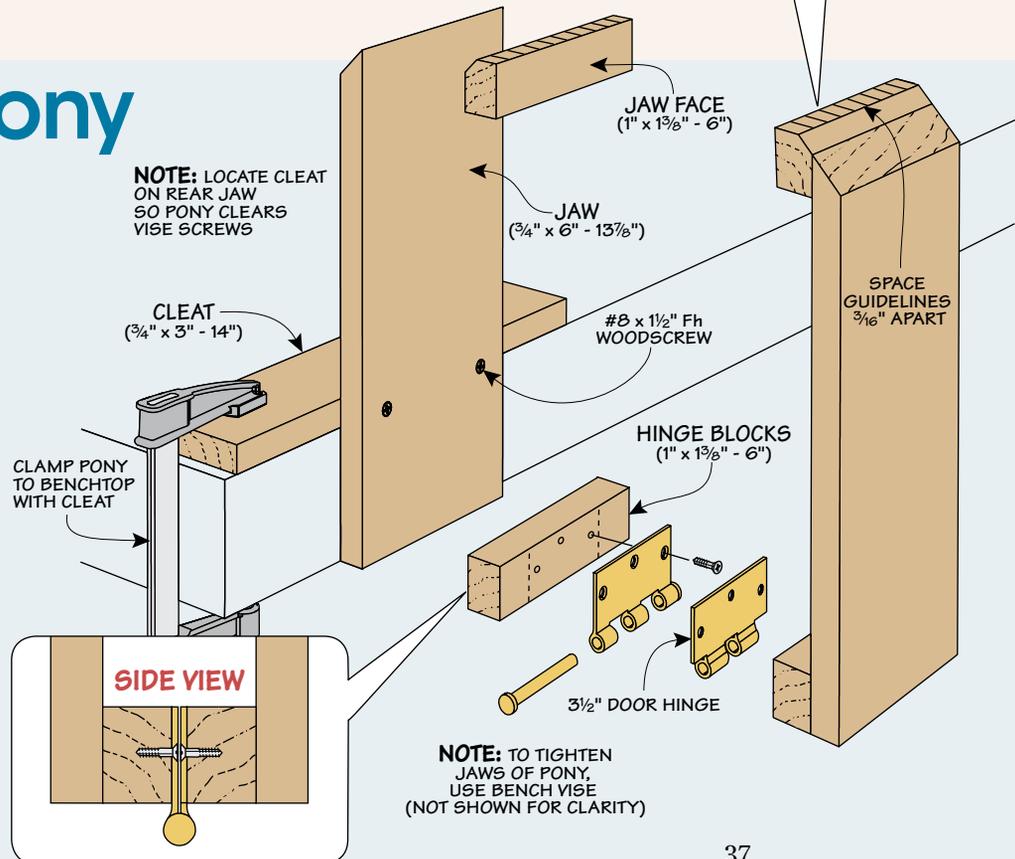
Folded Edge. There's one other thing you can do with the cement. And that's create a folded edge. You can see it on the top of the chisel pockets on the tool roll. It's a good way to create a smooth, durable edge. The right photo above shows you how it's done.

building a Stitching Pony

Small leather projects are easily assembled with hand stitching. To hold the parts together and guide the stitching, I made the stitching "pony" shown in the main photo on the opposite page.

The pony is basically a set of auxiliary jaws for a bench vise. The long jaws bring the pieces up to a comfortable working height. And bevels on the top edges of the jaws allow easy clearance for stitching, as shown in the drawing at right.

I attached a cleat to the rear jaw so the pony could be clamped to the benchtop. This way, it won't fall out as you loosen the bench vise. The final detail is the series of evenly spaced lines on the top of the jaws. They serve as a guide for spacing the stitches.

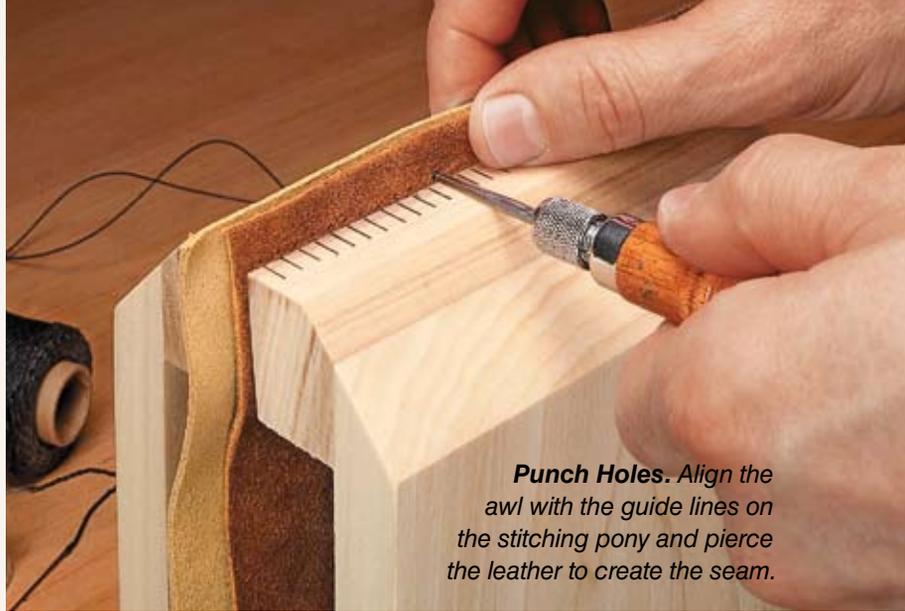


stitching the Leather

At this point, the leather pieces are sized and nearly ready to be stitched. Even though you glued the pieces together, what really adds strength is the stitching. All the stitching is done by hand. And it's surprisingly easy to do. There are a couple of other ways to secure the leather — rivets and grommets — and I'll talk more about these later.

Before getting into stitching the leather, you need to do one more step. Unlike sewing fabric, the needles are only used to pull the thread through the leather; they don't actually pierce the leather — you'll use an awl for that.

Punching Holes. To do this, place the leather pieces in the



Punch Holes. Align the awl with the guide lines on the stitching pony and pierce the leather to create the seam.

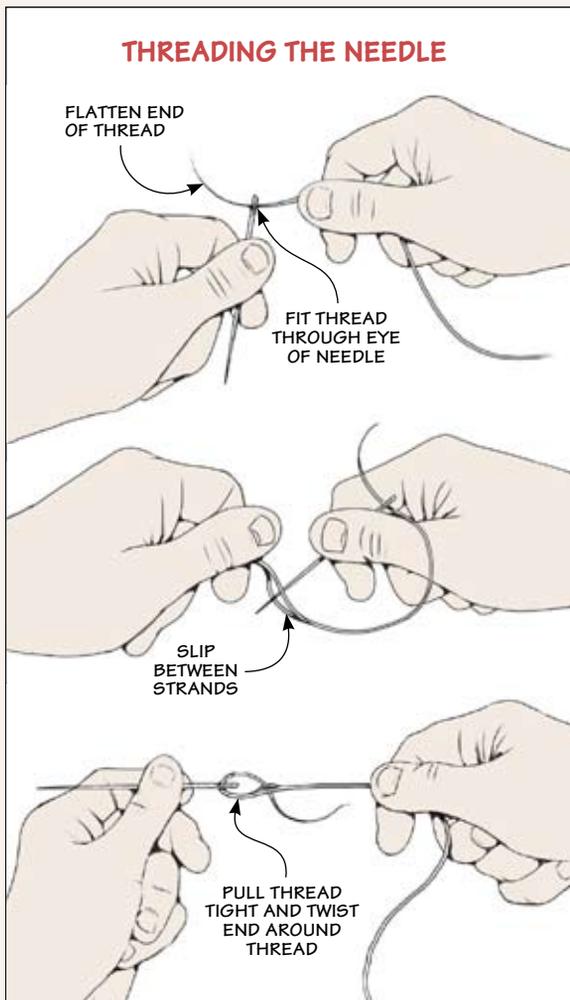
stitching pony with the seam aligned with the top of the jaws, as you can see in the photo above.

When punching the holes, you'll use a diamond-shaped awl. Hold the awl so that one flat of the blade is resting on the pony. This will create a series of angled holes. The angled holes help guide the thread to create a straight seam and keep the leather from tearing.

Thread the Needle. Now you're ready to thread the needles and get started stitching. You'll actually use two thick, blunt needles,

one on each end of the thread. Threading a needle sounds simple enough. But when working with leather, there are a few twists, as shown in the box at left.

First, to get the thick thread through the needle, flatten the end with your fingers and slip it through the eye of the needle. To keep the thread from pulling out of the needle as you sew, push the needle between the strands of the thread and pull the thread tight. Finally, twist the loose end around the working length of the thread.



▲ **Weaving Stitch.** With a needle on each end of the thread, start weaving them back and forth through the holes in the leather. As you complete each stitch, pull the thread snug (inset photo).

The five-stranded thread is heavily waxed for sewing leather. As you pull the thread, the wax melts a bit to lubricate it, making it easier to pull. Once in place, the sticky wax acts like a glue and helps hold the thread secure.

To keep the thread easy to manage while stitching, I only cut short lengths (just less than a full arm spread). It won't take you long to figure out how much thread you'll need for each seam.

Making Stitches. To start sewing, stand at one end of the pony and thread one needle through the first hole until the thread is centered. Then, with a needle in each hand, cross the needles through the next hole. This creates a strong, interlocking stitch. As you complete each stitch, pull the thread just until it's snug. If you pull it too tight the leather will pucker.

Troubleshooting. One thing that can trip you up is if a needle runs between the strands of the opposite thread. This creates a snag and prevents you from pulling the stitch tight.

If you catch it right away, you can just back the needle out and

continue stitching. Another solution is to cut the crossed thread free. To do this, carefully cut away some strands until the thread is freed up. (You should only need to cut two strands.)

When you reach the end of a seam, you need to secure the stitching so it doesn't pull out. To do this, reverse directions and back stitch two holes. Then cut the thread flush to the surface.

Long Seams. The stitching pony is wide enough to handle most of the seams in the chisel roll. But a few of the seams are longer, so you'll need to shift the leather in the pony. I prefer to punch the holes and stitch as I go before repositioning the pieces.

Rivets & Grommets. Besides stitching, there are some other fasteners you can add to a leather project to secure pieces together — rivets and grommets.

Rivets work to keep a seam from tearing or loosening at the end. I used these at the top of the pockets in the chisel roll.

Grommets provide reinforcement around holes. They both come in two parts. The parts fit together



◀ **Riveting Leather.** Fit the stem through the hole and place it on the anvil plate. Place the washer over the stem and tap the pieces together with a hammer.



▲ **Rivet Tools.** The rivet setter is sized to match the rivet stem. The plate has dimples to accommodate several sizes of rivets.

through a hole and are then "set" to form a strong connection.

Pilot Holes. The process for installing either begins with a pilot hole. For the rivets, I drilled a pilot hole with a twist bit that's slightly bigger than the stem on the rivet. Just take it easy on the speed, because the leather can climb the bit and get tangled.

To drive the rivets together, you'll need a setter and a steel plate. As you drive the pieces, you can feel them slide together and then bottom out for a solid connection, as shown in the photo above.

Grommets are installed in a similar way. The only real difference is that the hole is larger. To make these holes, I used a 1/4" chisel to make a square hole (inset photo at left). Then you can fit the two parts of the grommet together. Using a setting tool and matching anvil, roll the stem of the grommet tight to the washer (left photo).

By combining these simple techniques, you can make a wide variety of projects from leather. For a few ideas, take a look at the tool holders on the next pages. 🐾



▲ **Anvil & Setter.** The tools you need for setting grommets are similar to rivet tools, only a bit larger to match the wider stems.



▲ **Setting Grommets.** You can quickly create an opening for a grommet with a few chisel cuts (inset photo). Then place the face of the grommet in the anvil and tap the setting tool to compress the stem.