



Slip Seat Upholstery

Common materials yield a strong, comfortable seat.

By Matthew Teague

For some reason, woodworkers shy away from upholstery. While I understand a reluctance to tackle a sofa, making a slip seat for a chair, like the rocker on page 33, is a different story. Knowing how to construct and upholster a comfortable seat is just as important as understanding the joinery and finishing techniques used to build the chair. Luckily, basic upholstery requires only a few

readily available materials, plus some elementary woodworking and gift-wrapping skills. With practice, you can complete a seat in less time than it would take to drop it off at the upholsterer's.

As shown in the **Slip Seat Anatomy** (page 42), a slip seat combines a wooden platform with some kind of cushion covered with upholstery fabric. Here is my straightforward method for making a seat that will endure

for years of family use and abuse. My approach also makes reupholstering a cinch if an accident should happen.

Note: You'll find foam, batting, and fabric at an upholstery or fabric shop. Muslin is the traditional choice for wrapping the seat prior to the upholstery, but all-cotton curtain lining also works. If doing one chair, ask about remnants (short sections of rolls often sold at bargain prices).



A

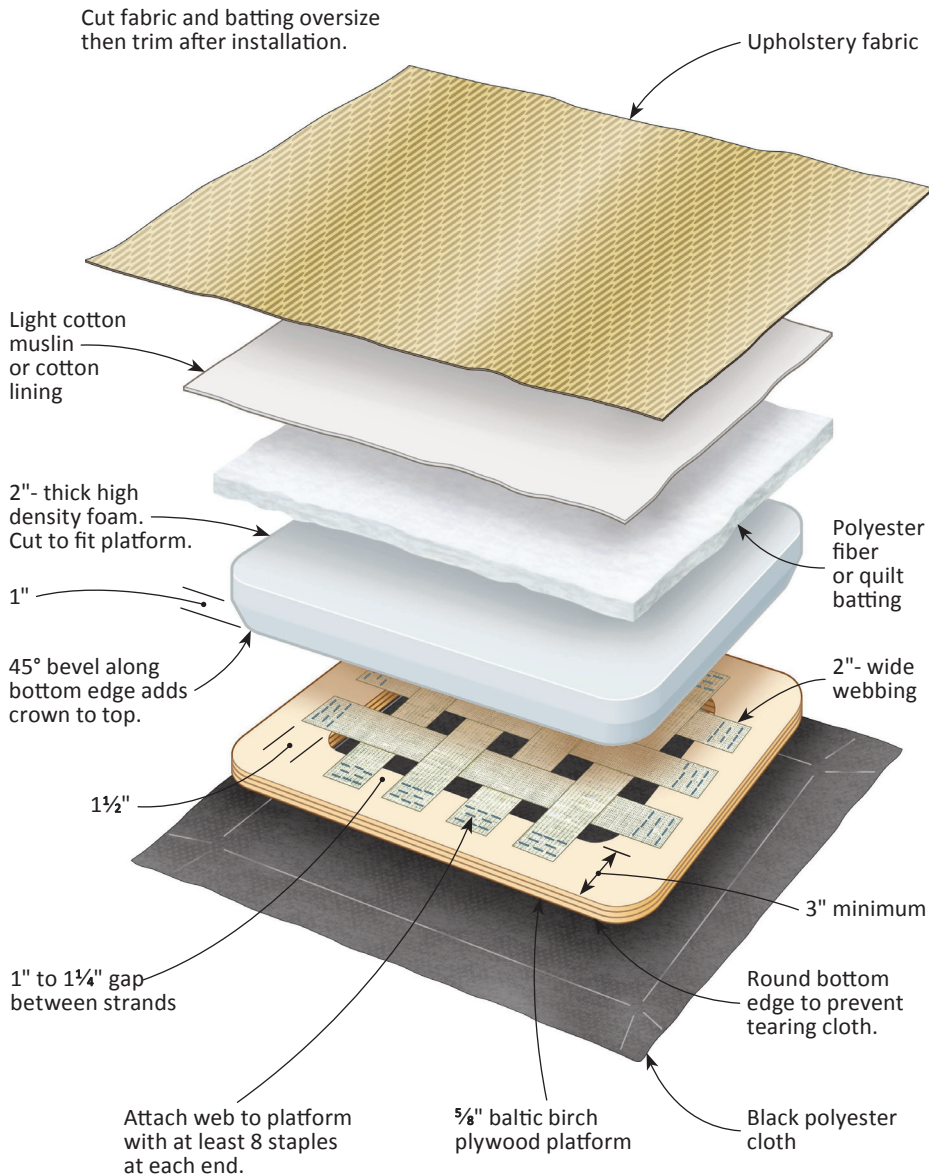
Weave the second course of webbing. Pull it taut against the edge of the platform and staple it in place.



B

Trace the platform onto the foam and cut it to shape on a bandsaw.

Figure 1: Slip Seat Anatomy



Make the platform and weave the webbing

Making a strong slip seat begins with a solid platform. I'm convinced that a plywood platform (for strength, I use Baltic birch) is not only the easiest to make but it's also the most durable. While you can get by with 1/2"-thick plywood for chairs, I recommend 5/8"-thick plywood for the larger rocker seat.

First, cut the plywood to fit inside the seat's rails. Allow a 3/16" to 1/4" gap between the plywood and the rail (the amount of wiggle room depends on the thickness of your upholstery). Next, use a router and 1/4"-radius bit to round over the platform's bottom edge so that the plywood won't cut through the fabric.



C

Cutting a 45° bevel on the bottom edge will create a crowned seat top when you apply the upholstery.



D Align foam with plywood carefully. Spray on adhesive and apply downward pressure to ensure good bond.



E Fit the polyester fiber onto the foam. Trim back any extra that runs over the edge of the plywood.

While some seat cores are solid plywood platforms, I prefer a webbed center. Regardless of the foam's thickness or density, it does compress, and a solid-plywood core will feel like you're sitting on a log. Webbing offers just the right amount of spring to make a seat comfortable for extended sitting. As a side benefit, webbing helps the foam last longer.

Not all webbing is created equal. I prefer synthetic rubber webbing rather than jute because it's easier to tighten and install. Look for a rubber webbing with at least a 90% stretch, meaning that it is designed to give no more than 10%. (With a tight weave it's even less.)

You can adjust the location of the center cutout to suit the sitter, but make sure to leave at least 3" of solid plywood around the seat's perimeter for strength. Drill a few blade-start holes in the plywood platform and then use a jigsaw to cut out the center section.

To install the webbing, first lay it out across the opening from front to back. Spacing isn't too critical, but aim for a 1" to 1¼" gap between the bands. For the rocker, I ran four equally spaced rows. To attach the webbing, fasten one end with 8 to 12 staples, stretch it as tightly as possible using hand

pressure, staple the free end, and then trim off the excess.

Next, attach the lengths of webbing from side to side. Staple them on at one side and weave them over and under the bands you already attached. Pull the webbing tight, staple it in place, and trim off any excess (**Photo A**).

Add the padding

To size the foam to fit the drop-fit seat, lay it on your bench, set the seat blank on top, and trace out the shape of the seat. Using a bandsaw outfitted with a fine-tooth blade, cut the foam to shape (**Photo B**). Next, angle the bandsaw table to 45° and cut a bevel along the bottom edge (**Photo C**). The bevel allows the foam to compress and create a slight, smooth crown, which lends a handsome look to the completed seat.

Once the foam is cut to shape, secure it to the platform using spray adhesive. Spray the adhesive on both the core and the foam. Allow the surfaces to become tacky, and set the foam in place (**Photo D**).

A layer of polyester fiber or quilt batting on top of the foam allows the lining and upholstery to move freely without rubbing against the foam. The batting also allows you to smooth and

Foam Facts

You can find urethane foam in a dizzying number of densities, but all you need to know is that the denser the foam, the firmer the cushion. For thinner seats, I'd recommend a high-density foam to provide the most padding possible. Both medium and high-density foams can be used for thicker seats. When building the rocker, I made and tested both types before settling on high density.

shape any ragged cuts or sharp edges in the foam. You can tack on the batting with glue or simply set it in place. Lay it on oversized (**Photo E**), and then trim it to fit. For drop-in seats, avoid letting excess batting bunch up against the plywood's edges, because it can prevent the platform from fitting into the chair frame. For a seat with exposed edges, cut the batting to overlay the plywood edge.

Tip Alert

Attach the webbing, lining, and upholstery to 5/8"-thick plywood with 1/2"-long staples. For 1/2"-thick platforms, use 3/8" staples.



F

Staple the liner to the front, then hand-hold the liner in place on the back and inspect the seat's crown before stapling down the back and sides.

Line and upholster the seat

Installing fabric lining on top of the foam and batting lets you preview the shape and even test-fit the seat in the chair before cutting any expensive upholstery. It also eases any future reupholstery work:

Instead of starting from scratch, you can simply remove the cover cloth and attach new fabric.

Cut your liner material to overhang the seat by 5" on each side and mark or cut the center of the front and back. Lay the lining on your bench and place the core assembly upside-down on top, aligning the center of the fabric with the center of the seat. Starting at the center of the front edge, drive four staples on each side of the center line, through the liner and into the plywood $\frac{1}{2}$ " in from the edge (**Photo F**). Pull the back tight and flip the seat over to make sure the profile suits your tastes. Continue stapling, alternating from the front and back edges to the sides, working out from the centers to the corners. Pull and staple the fabric so that you're left with an even crown and smooth profile along the seat's top edges. Stop 2" shy of the corners.

Tip Alert

Upholstering a seat requires hundreds of staples. An electric or pneumatic stapler can be a real hand-saver.

To avoid deep wrinkles when stapling the corners, grasp the loose fabric and pull to one side as you drive a staple on the opposite side. Alternate stapling opposite sides to secure the corner and then trim off the waste. Once the corner is tacked in place, fill in the staples between.

Applying the finish fabric is much like applying the liner, but with a few additional challenges. When using striped pattern or fabric that must be applied in one direction, notch the center of the front and back edges to indicate proper positioning. Refer to the notch when tacking on the fabric, as shown in **Photo G**. As you did with the liner, tack the fabric to the center of the platform and continue stapling outward to the corners.

Thinner fabrics or those that have a little elasticity (like the one seen here) can be stapled at the corner in the same manner as the lining (**Photo H**).



G

Notch the fabric at its centerline so that it can be easily aligned with the seat.



H

Pull the fabric to one side as you staple on the other to avoid creasing corners.

Thicker, less pliable fabrics can be folded closed, one side over the other, much in the fashion you'd wrap a Christmas present, and then stapled to create a clean pleat. To eliminate bumps with thick fabric, trim away the excess after tacking the corner in place.

Finish the seat bottom with black fabric to cover the staples and prevent the trimmed finish fabric from fraying. To create a neatly finished edged, cut the fabric about $\frac{3}{4}$ " oversize, fold the edges under, and then staple them in place. ■